Fall 1987

SOURCES OF STRESS IN MIDDLE CHILDHOOD: CHILD AND PARENT PERSPECTIVES

MARYANN COLLINS CORSELLO
University of New Hampshire, Durham

Order Number 8800185

Sources of stress in middle childhood: Child and parent perspectives

Corsello, Maryann Collins, Ph.D.

University of New Hampshire, 1987

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SOURCES OF STRESS IN MIDDLE CHILDHOOD: CHILD AND PARENT PERSPECTIVES

BY

MARYANN COLLINS CORSELLO

B.S. Northeastern University, 1976
M.S. Tufts University, 1983

DISSERTATION

Submitted to the University of New Hampshire
in Partial Fulfillment of
the Requirements for the Degree of

Doctor of Philosophy

in

Psychology

September, 1987

This dissertation has been examined and approved.

Carolyn J. Mebert

Carolyn J. Mebert, Dissertation Director
Associate Professor of Psychology

Victor A. Benassi

Victor A. Benassi
Associate Professor of Psychology

Rebecca M Warner

Rebecca M. Warner
Associate Professor of Psychology

David J. Hebert
Associate Professor of Education

Arnold S. Linsky

Arnold S. Linsky
Professor of Sociology

July 29, 1987
Date

In loving memory of my Father,

William M. Collins

ACKNOWLEDGMENTS

My sincere thanks to my chairperson, Carolyn J. Mebert, for her guidance through this dissertation, her patience in the face of my numerous questions, and her focus on the critical evaluation of research and social issues, which I have taken to heart.

I wish to thank Rebecca Warner for her statistical guidance, her enthusiasm, and her ability to focus my efforts when confusion set in. In addition, thanks to my other committee members, Arnold Linsky, Victor Benassi, and David Hebert for their interest, insight, and support of this project. Each member made significant contributions to the quality of this research.

My gratitude to the Dr. Richard Barnes, Stefan Vogel, Lee Ingraham, Kathleem Welch, and the York School Board, York Maine, for their support of this study. Special thanks to Carrie Crawford and Edna Goodwin for their conscientous and tireless assistance in conducting the project. Their help was critical to the success of this study. Thanks to the teachers at York Elementary School who so diligently supported this project, despite the inconvenience it sometimes caused. Finally, my greatest thanks to the parents and children who participated in my dissertation. I am grateful for their trust, their time, and their encouragement of my efforts.

I would also like to thank the University of New Hampshire for the CURF grant and dissertation year fellowship which greatly facilitated the completion of this dissertation. Thanks also to David C. Devonis for his artistic assistance in the development of a pictorial response scale. from the children's drawings.

Most of all, I wish to thank my family for being my constant support. In particular, my daughter, Therese, provided the inspiration to conduct applied research in child development and was my little "assistant" in many phases of this project. My loving thanks to Carl my husband for giving critical feedback as only an engineer can, for helping me with the many mundane tasks associated with this project, and for providing continual encouragement. I share with him this accomplishment.

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ABSTRACT

SOURCES OF STRESS IN MIDDLE CHILDHOOD: CHILD AND PARENT PERSPECTIVES

by

Maryann Collins Corsello
University of New Hampshire, September, 1987

Much of the literature on childhood stress is based on adult assumptions of what is stressful to children. Rarely are young children solicited for their perspective. The present study addressed the following two issues in the assessment of childhood stress: (1) Can young children give reliable and valid appraisals of potentially stressful situations? (2) Do these appraisals differ systematically from those made by parents for their children?

In small group discussions, children in grades 1 through 4 (N = 62) provided information on sources of stress and pictures of a "nervous" person. The child-provided stressors and the drawings formed the basis of a 67 item stress questionnaire which included a six-point pictorial Likert response scale. Frequency of and worry about each event were also measured.

This stress questionnaire, the Revised Children's Manifest Anxiety Scale (Reynolds and Richmond, 1985), Psychosomatic Symptom Checklist, Child Behavior Checklist (Achenbach and Edelbrock, 1983), and Life Events Scale for Children (Coddington, 1972a, 1984) were then administered to

218 pairs of parents and children in Grades 1 through 4.

The results revealed that children are capable of stress appraisals which are internally consistent (alpha coefficients from .84 to .96), moderately stable (retest coefficients from .62 to .71), and significantly related to anxiety and psychosomatic symptoms (*rs* range from .27 to .57).

Parent-child convergence on stress ratings, frequency of, and worry about stressful events, and ratings of anxiety was low (r = .065 to .170). Parents reported that children experienced significantly more stressful events than the children reported. Grade and Sex differences were found in the children's data while Family Status and Income differences were found in the parent's data.

Implications for the direct assessment of stress in children, comparison of child-reported information with adult assumptions, nature of parent-child differences, and use of the stress questionnaire as both a predictor and criterion of anxiety and symptoms are discussed.

CHAPTER I

INTRODUCTION

Stress in childhood is a concept that has captured the attention of many parents and professionals alike. The assumption that children today may be experiencing more stress than ever before alarms many parents. To meet this growing concern, the popular press has graciously provided an overabundance of advice on what situations are stressful to children, and how parents can alleviate the harm they have caused in "hurrying" their children through their youth. Unfortunately, our empirical knowledge of these issues lags behind the advice given in the popular press.

The concept of stress has been around for many years, although hidden under various names such as worries and concerns or anxiety. Excellent reviews of the literature on stress in adults are provided by Goldberger and Breznitz (1985) and Eliott and Eisdorfer (1982). Historically, it was not until the appearance of Selye's biological model in 1956 that the concept of stress as we know it today emerged. Even from the outset, the new concept was not clearly distinguishable from anxiety or frustration. Selye detailed the ways in which demands placed on individuals can produce physiological responses, including psychosomatic and other illnesses. Research by Holmes and Rahe (1967) and their colleagues, using the Life Events Scale, had provided much

evidence in support of Selye's model and has pointed out that the demands that produce stress reactions can be both positive and negative. However, later research found no correlation between positive life changes and illness (Thoits, 1983).

Lazarus and Launier (1978) emphasized a cognitive approach to the understanding of stress. According to their model, the individual's perception of the potentially stressful event, combined with knowledge of his/her coping resources determines the amount of stress experienced. The key features of their model are two appraisal stages, one to appraise the potential harm or threat associated with the event, and then a second stage to appraise coping strategies. These two factors intervene between the environmental event and resulting stress reaction.

Despite the numerous studies conducted on adult stress, the topic of childhood stress has received much less attention. The studies that have been conducted typically employ adult appraisals of the stressfulness of events for children (e.g. Coddington 1972a, 1972b). If one surveys the current literature on childhood stress, very rarely is the child ever given the opportunity to appraise the event for him/herself. In fact, there is no evidence of children in grades one through four giving any assessment of the events that adults have decided are stressful. In the few studies which ask older elementary aged children for stress ratings of events (Colton, 1984; Yamamoto, 1979,1982), one sees a fair amount of discrepancy when children's ratings are

compared to adult ratings. Yet, the currently available stress assessments (Chandler, 1985; Coddington, 1972a,1984) still rely heavily on the adult perspective. The child's only active role in these assessments is to respond to CAT or TAT cards (Chandler, 1985). Applying Lazarus's model to the existing childhood stress literature reveals the following relations: adults select potentially stressful events, adults appraise these events for children, adults assess the child's stress reaction.

This application of Lazarus's model would appear to violate the key element, the child's own appraisal of his environment and reactions. What if the child's perception and experience of the world differs significantly from that of the adults? If this is the case, the actual experience and causes of stress in children may be misrepresented, thus reducing the effectiveness of various assessment and treatment programs, as well as research efforts aimed at elucidating the link between stress and illness in children.

This study will address two central issues in the assessment of childhood stress. First, can children give reliable and valid appraisals of potentially stressful situations? Second, do these appraisals differ systematically from those made by parents for their children? The results of this research will provide new insight into the child's own appraisal of the stressfulness of events, the relationship of these events with anxiety and psychosomatic symptoms in elementary school children, and the differences between child and parent appraisals.

Literature on current childhood stress inventories will be reviewed with particular attention paid to the use of children as informants, the predictive validity of these instruments, and existing methodological flaws. A discussion on the evidence for appraisal differences between child and adult will follow.

Current Childhood Stress Inventories

Coddington's Life Events Scale

The most widely used scale in assessing stress in children is Coddington's Life Events Scale (1972a,b;1984). Originally adapted from Holmes and Rahe's (1967) life events scale for adults, Coddington lists life events for preschool, elementary aged, junior high students, and high school students and has professionals rate each event as to the amount of change required of children to adapt. These judgments are then used for weighting each of the items. The parent checks which events have occurred within a specified time period and the cumulative life change score becomes an index of the stressfulness of the child's environment.

Coddington's scale has been employed in a wide variety of studies linking stress to illness in children. Heisel, Ream, Raitz, Rappaport, and Coddington (1973) found that children suffering from either juvenile rheumatoid arthritis, hemophilia, or various physical or mental problems had experienced more frequent and/or more severe life events prior to the onset of their illnesses than did their healthy peers.

A link between the occurrence of life events and family routines with childhood respiratory tract illness was found by Boyce, Jensen, Cassel, Collier, Smith, and Ramey (1977). Their results indicated that the magnitude of life change was related to the average duration of illnesses experienced. In addition, major life change which occurred in highly ritualized families appeared to predispose children to greater illness severity. Bedell, Giordani, Amour, Tavormina, and Boll (1977) found that life experiences were related to differences in the frequency of acute symptoms in children with chronic illnesses. Jacobs and Charles (1980) studied the relationship between life stress and cancer and found that the number of events experienced by a group of twenty-five pediatric cancer patients was twice that experienced by a matched comparison group. Employing a nonclinical sample of adolescents, Hotaling, Atwell, and Linsky (1978) found the occurrence of life stress was significantly related to various mental and physical and illnesses.

Stressful life events experienced in childhood have also been linked to behavioral and psychological problems. The occurrence of recent stressful life events in the lives of children in grades 1 to 4 was studied in relation to school adjustment (Sterling, Cowen, Weissberg, Lotyczewski, & Boike, 1985). Stressful life events were found to be associated with the presence of serious school adjustment problems and fewer competencies. The associations were strongest for children who had experienced three or more of the 11 negative

life events.

Sandler and Block (1979) found that maladjusted children, as a group, differed from controls in the total number of life events experienced, total life change unit scores, and the number of undesirable events. In a reanalysis of these data, Sandler (1980) found that the relationship between change and adjustment was higher in children for whom social support was lacking than in children for whom social support was more evident. Social support was defined as having an older sibling in a two-parent family.

Barrera (1981) studied pregnant adolescents and found that undesirable life change was associated with the frequent experience of anxiety, depression, and psychosomatic symptoms. However, social support served to reduce the frequency of depressive symptoms. Gersten, Langer, Eisenberg, & Orzeck (1974) found that primarily negative life change was associated with anxiety, self-destructive behavior, conflicts with parents, fighting, delinquency, isolation, and overall impairment in children and adolescents.

Results from a study conducted with chronically ill children (Bedell et al, 1977) revealed that children who had experienced few stressful life events had a more positive self-concept in general and rated themselves as being better behaved, more intelligent in school, more physically attractive,more socially popular, happier, and more satisfied with themselves than the children who experienced many

stressful life events.

Finally, recent work by Wortlieb, Weigel, & Feldstein (1986) has examined the influence of stressful life events and social support on susceptability to illness and child behavior problems. Undesirable life events had the strongest relationship to behavior symptoms, with social support also a significant predictor. These predictors together accounted for 32% of the variability in illness and behavior problems. When temperament was examined as a possible moderator variable between stress and illness (Wortlieb, Weigel, Springer, & Feldstein, 1986) the level of prediction increased. Multiple regression models accounted for between 46 and 61 percent of the variance in behavior symptoms and included significant main effects for stress, several dimensions of temperament, and some interactions between stress and temperament. Temperament appeared to function as a moderating influence in the relationship between stress and behavioral symptoms.

Other Life Events Inventories.

Colton (1985) developed an instrument to measure children's perceptions of stressors in their lives, as well as their experiences and emotional reactions to these stressors. Her instrument, COPES, contains a list of 60 items representing items from existing scales, as well as a sample of items from children themselves. Children in grades 3 through 6 responded to each item using a 5-point Likert scale as to how upsetting the item would be for most children, and then they are asked to rate if the event ever

happened to them and whether it worried or upset them if it did happen. One hundred eighty-one children and 35 professionals working with children responded to the scale. Responses from the children were factor analyzed and yielded the following seven factors listed in order of mean severity of upset to the child: major life events, serious school problems, family disruption, isolation, cognitive overload, financial, and stepfamilies. Across groups, children's ratings were higher than professionals' ratings on all seven factors. An interesting finding was that while major life events were consistently rated as most stressful, items which could be categorized as interpersonal hassles (Delongis, Coyne, Dakof, Folkman, & Lazarus, 1982; Kanner, Coyne, Shaefer, & Lazarus, 1981) accounted for more of the variability in the children's stress ratings. No patterns of results were found according to grade, race, or gender. To date, no reliability or validity information on the COPES has been published.

Johnson and McCutcheon (1980) have developed an alternative life change measure that is suitable for older children and adolescents. The Life Events Checklist consists of 46 events selected from Coddington's scale, modified items from adult life stress scales, items from the author's experience with children, and items from a group of 44 adolescents. Items were divided into those over which the adolescent had control and those which were beyond their control. The adolescent rates each item as either good or

bad, and then decides whether the event had no effect, some effect, moderate effect, or great effect on their lives.

Several studies have employed the Life Events Checklist (Johnson & McCutcheon, 1980) to measure the effects of stress. Gad and Johnson (1980) found negative life change scores to correlate significantly with various self-report of physical and psychological illness and drug use. Positive events were related to fewer variables. Johnson and McCutcheon (1980) revealed significant correlations between negative change scores and depression, anxiety, emotional maladjustment, and an external locus of control orientation for adolescents ages 13-17 years. High levels of positive events were associated with an internal locus of control orientation. Significant correlations between negative events and health related concerns were found for males only.

A number of other life event scales have been recently developed for adolescents (Beall & Schmidt, 1984; Dise-Lewis, 1984; Metcalfe, Dobson, & Michaud, 1982; Monaghan,Robinson, & Dodge,1978; Swearingen & Cohen, 1985; Tolor, Murphy, Wilson, & Clayton, 1983; Yeaworth, York, Hussey, Ingle, & Goodwin, 1980). Most of these scales are modeled after Coddington's scale, but tend to include more items directly relevant to the adolescent's experience and have the adolescents themselves rate the stressfulness of these events.

Limitations of Current Stress Inventories

In general, current childhood stress assessments are plagued by several limitations and methodological problems (Felner, 1984; Johnson, 1982, 1986). A majority of these inventories lack basic reliability and validity information. Both positive and negative events are included in the same summary score, despite evidence that only negative events are significantly associated with negative health outcomes.

The presence of adult biases and assumptions are rampant, especially in the instruments designed for young children. For example, most of the child inventories rely almost exclusively on the occurrence of life events involving major changes in the family. The implicit assumption is that the child's life is influenced solely by the family, and emerging relationships with peers and in school do not impact the life of the child. In addition, current stress inventories for children assume that the adult's perception of events is a valid indicator of the child's perception, despite warnings from various theorists (Anthony, 1974; Kagan, 1979; Kessen, 1983). Given the importance placed on personal appraisal of the potentially stressful event by Lazarus & Launier (1978), the use of adult selection and weightings of stressful events constitutes a serious methodological and conceptual flaw. Preliminary efforts to include the child's appraisal have been successful with adolescents and older elementary aged children (Colton, 1984; Johnson & McCutcheon, 1980). Currently, there is no valid child-based instrument for children in grades one through

four.

Despite these limitations, life events scales have been widely employed to measure the link between stress in the child's environment and some type of physical illness or psychological problem such as anxiety, depression, or maladaptive behavior. However, for most studies the size of the effect tends to be somewhat weak, with reported correlations of .2 to .3 accounting for less than 10% of the variability in the outcome measure (Johnson, 1982, 1986). Assuming this relationship is valid, methodological weaknesses could be accounting for these modest effects (Felner, 1984; Johnson, 1982, 1986). These weaknesses include heavy reliance on self-report data, use of retrospective methods, and inclusion of items which could also be considered symptoms of stress. In fact, several researchers have reported that some significant correlations have disappeared when methodological problems were resolved (e.g. Gersten, Langer, Eisenberg, & Simcha-Fagan, 1977; Schroeder & Costa, 1984).

Also affecting the size of the relationship may be moderator variables which intervene between the stressful event and the individual's reaction to it (Felner, 1984; Johnson, 1984; Rutter, 1983). Research which has included variables such as social support (Sander, 1980; Barrera, 1981; Wortlieb et al., 1986) and temperament (Wortlieb, 1986) have reported stronger effects. Rutter (1983) suggests that other factors such as genetics, intelligence, problem solving skills, and personal appraisal of the event may also be

accounting for the differential influence of environmental stress.

Thus, the limitations of the current stress inventories provide clear guidelines for the creation of a new instrument which would be more effective in defining both the nature of stress in children and the relationship between stress and illness. A critical improvement in the measurement of stress would be to obtain the child's view of his/her sources of stress and to compare how this perspective differs from that of the parent. If appraisal differences occur between parents and children, then current methods for measuring stress in children will need to be reassessed.

Evidence for Appraisal Differences Between Child and Adult

Adults and children differ in many dimensions which may affect how they understand and interpret the world around them. One way of comparing the world of children and adults is to refer to various theories of development.

Theories of Development.

According to these theories, what might the life of the child be like during the ages of 5-10? In terms of intellectual development, the child has just moved from animistic thinking to more logical thinking, reasoning, and problem solving in a variety of tasks. Throughout this time period, these skills will mature and develop into the beginning of formal operational or abstract thought (Piaget, 1952). In terms of social and emotional development, the middle childhood years, as seen by Freud, are a time for skill development and consolidation of earlier psychosexual

acheivements. Termed the latency period, these years are ones of relative emotional stablility in constrast to the preceding phallic stage and the advent of the genital stage (Freud, 1940/1964). Erikson sees the crisis of this stage as one of industry vs inferiority (Erikson, 1963), while Henry Stack Sullivan emphasizes the importance of interpersonal relationships during this time (Sullivan, 1953).

An adult, on the other hand, has completed his/her intellectual maturation and therefore his/her thought processes should be remaining stable, has also completed all Freud's psychosexual stages, and is now grappling with other crises relating more to intimacy vs isolation and generativity vs stagnation according to Erikson. From a theoretical standpoint it would appear that children and adults would possess differing views of themselves, others, and society in general.

The Role of Change.

A second way of understanding the differences between adults and children and their interpretation of the world is to look at the role of change, a concept directly related to the issue of stress. Several theorists understand stress as resulting from a struggle to adapt to life change. In fact, Holmes & Rahe (1967) and Coddington (1972) assess the stressfulness of events in terms of "life change units" or the amount of adaptation each event necessitates. Stress conceptualized in this manner may be an inappropriate definition for a child who is constantly growing and changing. Thus, the nature of change may be experienced

differently in the child and in the adult.

Collins (1984) interprets the middle childhood years as a time of adaptation to change on several dimensions at once. For example, children of this age period come to understand issues of illness and health, behavioral norms and conventions for various social settings, conception, and death in more sophisticated way than was possible in the preschool years (Hartup, 1984; Markus & Nurius, 1984; Weisner, 1984). Academic self-concept is forming at this time (Epps & Smith, 1984; Markus & Nurius, 1984) as well as feelings of self-esteem. There are also marked changes in the proportion of time spent at home and with parents, compared with time spent with peers. In addition, the nature of family and peer relationships undergo significant transformations as well (Hartup, 1984; Selman, 1980; Weisner, 1984).

Thus the child's world at this age is one of change on many dimensions. The role of change in a child's life may not be directly comparable to that of an adult for whom change may be an infrequent occurrence. In fact, Maccoby (1983) has postulated several developmentally-based hypotheses dealing specifically with the differential experience of stress in children and adults. For example, she suggested that the younger the child, the greater the importance of environmental structure in reducing the child's vulnerability to behavioral disorders under potentially stressful conditions. Also, she postulated that the nature of the distress imposed by absence or disruption of peer friendships

changes with age, going from the loss of valued activities to the loss of emotional support. These are a few of the thirteen hypotheses she presented as examples of the interaction of stress with developmental change.

Taken as a whole, these theories and findings indicate there is ample evidence that parent and child world views could be sufficiently different so as warrant separate appraisals of potentially stressful environmental events. Adult's perspective on the issues can not substitute for the child's understanding of his/her world and life. Anthony (1974) observed that "Stress experienced by the child and stress as estimated by the adult observing the impact of stress on the child are frequently of very different orders of magnitude" (p.106).

Studies of Stress from the Child's Perspective.

There are a few early studies employing older children which examined environmental stressors from the child's perspective. Early works (Angelino, Dollins & Mech, 1956; Jersild, Goldman, & Loftus, 1941; Pinter & Lev, 1940; Winker, 1949; Zeligs, 1939) documented the "fears and worries" of 5th and 6th grade students by means of a questionnaire. When items were grouped into categories, concerns regarding family and school issues ranked first and second, with personal adequacy, social adequacy, economic problems, and health problems following in order.

More recently, Lewis, Siegel, & Lewis (1984) asked a group of sixty 5th and 6th graders "What happens that makes you feel bad, nervous, or worry?" These responses were used

to create a "badness" questionnaire in which children rated the intensity and frequency of these events on 5-point scales. Preliminary results from over 2,400 5th graders revealed the five main sources of psychological distress to be the following: Not spending enough time with parents, having your parents argue in front of you, being late with homework, having nothing to do, and not having enough money to spend.

Yamamoto (1979) had children in grades 4, 5 and 6 rate 20 life events on a 7-point scale. His results indicated that children could assess the perceived stressfulness of events in a discriminating manner. Some experiences such as the loss of sight, academic retainment, and wetting of pants were infrequently experienced but found to be very upsetting. Other events like parents fighting and being suspected of lying were more common, but also stressful. When compared to the ratings of professionals (Coddington, 1972a), children's assessment of events such as death of a parent and academic retainment were very similiar. However, there were instances of disagreement such as children viewing parental fights as more stressful and birth of a sibling as less stressful than professional ratings.

Yamamoto and Davis (1982) gave this same list of 20 life events to a sample of Japanese children in grades 4,5,and 6. Japanese children were also able to make discriminating judgements of these events. The correlation between the scale values for American and Japanese children was .91, even though the frequencies of various events were quite

different.

Magnusson's work on situational determinants of stress (1982) documents the importance of attending to the perceived environment in which the stressful event takes place. How an individual perceives the environment differs as a function of age. Children ages 12-18 were asked to report the three most anxiety provoking situations that came to mind and to describe why each situation made them anxious. When giving explanations, the preadolescents often referred to the physical properties of situations, external bodily consequences, and possible external sanctions. In contrast, older adolescents referred to psychological consequences such as anticipated shame, guilt, separation, or lack of personal integrity. Younger subjects spoke about spatially and temporally close sanctions. Older ones referred to anticipated consequences in the future, such as marriage, etc. The preadolescents even had difficulty conceptualizing the consequences for themselves.

In a second study, Magnusson (1982) obtained data from three age groups, 11-12, 14-15, and 17-18 on similarity ratings of 11 stressful situations. Results indicated a gradual decrease with age in similiarity ratings based on manifest characteristics (similiarity judged on basis of common central object or person) and a corresponding increase with age in similarity ratings based on latent characteristics (similiarity judged on the basis of common theme of physical injury, separation, guilt, and shame). Thus the study demonstrated age differences in the perception

and interpretation of threatening, stressful situations. One can only speculate what differences would have been found between younger children and older adults.

Studies Comparing Child and Adult Perspectives

Two studies have actually compared child and adult ratings of stressful events. Yamamoto and Felsenthal (1982) had professionals rate the same list of 20 life events and compared them to the ratings from both the American and Japanese children. The professionals made three judgments; the degree of upset caused by each item from their perspective as professionals, the degree of upset caused by each item if they were to infer and child's reaction, and the proportion of children who actually experienced each event. Results revealed the correlations among various groups of professionals to be high, ranging from .90 to .98. However, correlations between professional's ratings and child's ratings were .68 and .70 for judgments made as professionals and judgements infered for children, respectively. The correlation between actual frequency and estimated frequency by the professional was .87. It is interesting to note that interrater agreement among children of different cultures was higher (r =.91) than the degree of interrater agreement between children and adults of the same culture (r =.68).

To assess the accuracy of professional judgments with those of adolescents, Coddington had 368 adolescents rate each of the life events (Coddington, 1984). A Pearson product-moment correlation between weights assigned by adolescents and those assigned by the professionals was .37,

while a Spearman rank order coefficient was .65. Coddington found that the rating behavior of the adolescent judges was quite distinct from that of the adults, with the adolescents using many more extreme values. The data from all judges were then combined and weights for the current LES-A (adolescent scale) were devised. However, weightings for the items on the LES-C (child scale) were derived solely from professional judgments, because according to Coddington (1984, p.104) "...children were not solicited for their opinion due to the possible threat such an inquiry might invoke."

Parent-child agreement using the Life Events Scale for Children has been studied on a population of fourth grade children and their parents (Coddington, 1984). Children and parents were to check which of the life events had occurred in the past year. Weightings for the events were not solicited. Children reported fewer family and extrafamilial events than did their parents. The correlation coefficients between LES-C scores computed from parents and children were .26, .27, and .27 for familial events, extrafamilial events, and total scores, respectively. The correlations between parents and their adolescent children employing the LES-A were somewhat higher, depending on the time period covered. If the occurrence of events was recalled from the past 7 months, correlation coefficients were .57, .39, and .45 for familial, extrafamilial and total scores, respectively. If raters were asked to recall events between 11 and 23 months ago, correlation coefficients dropped to -.01, .43, and .37

for familial, extrafamilial, and total scores, respectively. Though most of these correlations were significant, Coddington admits that young children and their parents are not in complete agreement even regarding what events have occurred. "Parents cannot be assumed to be accurate assessors of the stressfulness in their child's life" (Coddington, 1984, p. 111).

Other studies have compared parent and child information obtained during structured psychiatric interviews. Herjanic and Reich (1982a) compared responses from 307 mothers and their children aged 6 through 16 during a highly structured psychiatric diagnostic interview. They found the highest agreement on questions concerning symptoms that are concrete, observable, severe, and unambiguous. Mothers tended to report significantly more behavioral symptoms. In contrast, children reported more subjective symptoms including those of various neurotic disorders and depression, more somatic symptoms, and more antisocial behaviors. Diagnoses were then compared based on information from the psychiatric interviews with the child and mother (Reich, Herjanic, Welner, & Gandhy, 1982b). Overall, the results showed more disagreement than agreement on diagnoses based solely on separate interviews with mothers and children. Across age, enuresis and possible depression were the most reliably diagnosed by both mother and child interviews. Overall, older children (ages 12-16) showed more agreement with their mothers than did younger children. At the younger ages (6-9 years) the poorest agreement was for neurotic disorder (-.05) and behavior

disorder (.09).

Child and parent evaluations of depression and aggression were investigated in psychiatric inpatient children (Kazdin, Esveldt-Dawson, Unis, & Rancurello, 1983). The findings revealed that children and their parents differed in their ratings of depression and aggression, with children providing significantly less severe ratings of their symptoms than did their parents. The mean correlation between child and parent for self-report was .28 and for interview measures was .32. In contrast, the mean correlation between mother and father was .77 for self-report and .69 for interview measures regarding their child's symptoms.

In order to determine the degree of consistency between different informants' reports of the behavioral and emotional problems of children aged 1 1/2 to 19 years, Achenbach, McConaughy, and Howell (1987) conducted a metanalysis of 269 samples in 119 studies. They found the mean Pearson rs to be .60 between similar informants such as pairs of parents; .28 between different types of informants such as parents and teachers; and .22 between children and other informants. The authors suggested that this low correlation between children and other informants was not due to unreliability in the child, since they found a mean r of .74 for the retest reliability of children's self-ratings.

The above theoretical viewpoints and empirical evidence all serve to suggest that appraisals made by adults and children are, in fact, different. Different states of

development, different sets of day-to-day experiences, different amounts of change, and different perceptions of the environment, would appear to dictate different appraisals of potentially stressful events. Given this discrepancy between parent and child perspectives, two improvements could be made in the way childhood stress is assessed.

First, an attempt should be made to include items more relevant to the child's day-to-day experiences, rather than relying solely on major life events. In his review of children's adaptation to life changes, Felner (1984) concludes that "...the immediate stress associated with the critical life event may play a far lesser role in making such events significant hazards to development than do changes and stressors in the child's social environments associated with the event"(p.159). Felner's life transitions framework focuses on how life events become translated down to children as a reorganization and modification of social networks and supports, routines in daily life, interaction with parents, and psychosocial roles. He contends that items on stress inventories should address the above issues, which will be applicable to children experiencing a wide range of stressful life events. Colton (1984) found that children's "hassles" explained more of the variability in stress ratings than did life events. This same finding has been documented in the adult stress literature where "hassles" have been strong predictors of negative outcomes (Delongis et al, 1982; Kanner et al, 1981).

Second, children should be appraising the stressfulness

of events in their lives. There is no evidence that child and adult perceptions are veridical. According to Lazarus & Launier (1978), whether or not an event is experienced as stressful depends on the individual's appraisal of it. Adults should not be making these appraisals for children, unless of course, it is demonstrated that children are not capable of reliable reporting.

CHAPTER II

INSTRUMENT DEVELOPMENT

The following study was conducted to develop a stress questionnaire appropriate for children in grades 1 through four. Two improvements over current inventories were incorporated. These were the addition of items relevant to the children's experience, and the employment of a response format which would allow children to rate their own sources of stress.

Method

Subjects

During May, 1986, approximately 100 students enrolled in Grades 1 through 4 in York Elementary School, York, Maine were asked to participate in a study of the worries and concerns of elementary school children. Parents were mailed a cover letter describing the study and a child consent form to sign (See Appendix A). Students were informed of the study in their classrooms the same day parents received the letters. Sixty-two children (30 boys and 32 girls) in Grades one through four obtained parental permission and volunteered for this study.

With the exception of grade and sex, no other demographic information was obtained from the participants in this first study. However, these children came from the same elementary school as those who participated in the larger study. Demographic information from that study is presented

in Table 3.1.

Procedure

Instrument Development. For the first part of the study, the children were interviewed for 30 minutes in groups of 4-5 to ascertain how they understood the concepts of stress and coping, what words they used to describe these concepts, and what events they felt were stressful at home,school,with their peers, and in general. They were then asked what they did to make themselves feel better when they felt nervous or uptight. As part of these discussions each student also drew a picture of what a "nervous or worried" person would look like.

Testing of Instrument. The second part of the study investigated the children's ability to make systematic appraisals of the stressfulness of these items. The stress questionnaire was administered to groups of 4-5 students (See Appendix B for a full description of the instructions given to the children.) For each of the items children were asked "How would you feel if..." They were then requested to circle the picture of the child which matched how they felt about each item. The entire set of items was repeated and the children were then asked to circle the graph that matched how often the event happened to them. This scale was also a six-point Likert scale ranging from not at all to all the time. In addition to the stress questionnaire, an anxiety scale (Revised Children's Manifest Anxiety Scale (RCMAS), Reynolds & Richmond, 1985) was also administered. All tasks were presented orally, eliminating reading comprehension as a

factor in performance.

Results

Instrument Development

Transcripts of the interviews were used to generate lists of potential stressors for the children. More than 100 items were grouped into the following categories: life events; home, school,and peer stressors; and stressors that were self-oriented. In order to reduce the length of the stress questionnaire, 50% of the items in each category were selected for inclusion. Criteria for inclusion were the frequency with which an item was mentioned, its lack of redundancy with previously chosen items, and its representativeness of a class of events reported by students. The wording of the items came directly from the transcripts whenever possible. Items not mentioned by the students, but popular on the existing child stress scales were also included, resulting in a 51-item questionnaire, The Children's Stress Assessment Scale (CSAS).

In order to develop an appropriate pictorial response scale, the children's drawings were brought to an artist who looked for recurrent facial or bodily features that were used by the children to characterize the experience of stress. The artist then developed two prototypical figures of someone under stress. One figure included only the face and the other included the whole body. A six-point pictorial likert scale was developed for each prototype beginning with a neutral face or body and progressing in five approximately equal increments toward an increasingly stressed

representation. The prototypes were drawn in both boy and girl versions. Figure 2.1 illustrates the final version of this pictorial response scale.

Insert Figure 2.1 about here

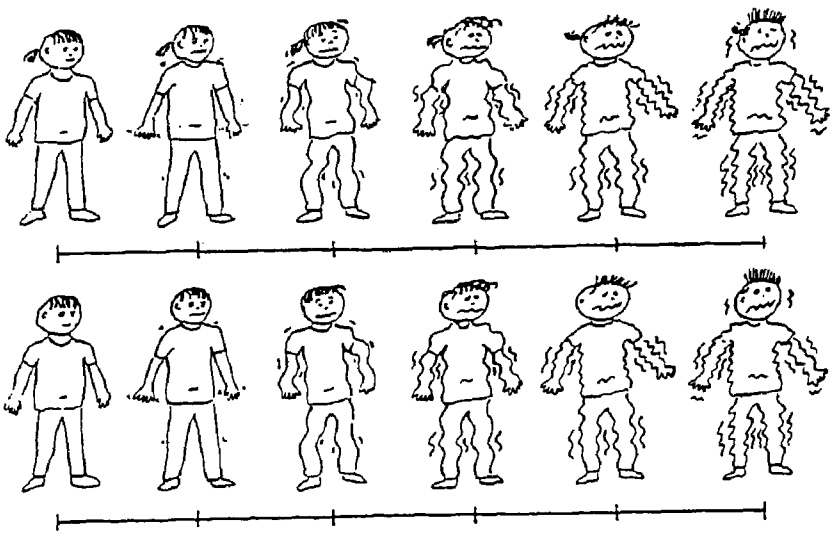
Each of the six representations were separated and given to students to seriate and to choose which prototype, face or whole body, better captured their experience of stress. Approximately 90% of the entire sample seriated the representations with perfect accuracy. The whole body prototype was preferred by 85% of the sample and thus was adopted for use in the stress questionnaire. A set of the six representations was repeated for each item.

Testing of Instrument

Appendix C lists the mean ratings and standard deviations for each CSAS item. Due to an insufficient sample size, a factor analysis could not be performed on this questionnaire. Thus, summary scores were created for the stress rating and frequency subscales. The summary score for the stress rating subscale consisted of the average rating across 51 items. The summary score for the frequency subscale consisted of the average frequency rating across events. The summary score for the RCMAS consisted of

Figure 2.1

Pictorial Response Scale for Boy and Girl Versions of The Children's Stress Assessment Scale (CSAS)



the total number of items answered affirmatively. Table 2.1 lists the summary scores for the stress rating subscale, frequency subscale, and RCMAS by Grade and Sex.

Insert Table 2.1 about here

A Multivariate analysis of variance with Grade and Sex as grouping variables was performed on these summary scores (see Appendix 2.1). Results revealed a multivariate effect for Sex which approached significance (Wilks' criterion $F(3,44) = 2.576$, $p<.066$) with a significant univariate effect for sex in RCMAS scores ($F(1,46) = 6.530$, $p<.014$). The univariate sex effect in stress ratings approached significance ($F(1,46) = 3.816$, $p<.057$). There were no significant effects for Grade or a Sex by Grade interaction (see Appendix D for summary table).

Experience with a stressful event influenced the ratings of only a few items. Independent t tests on those who had and had not experienced each item revealed that some events were more stressful if not experienced. This was true of divorce ($M = 4.549$ for nonexperienced vs $M = 2.555$ for experienced; $t(56) = 3.513$, $p<.0004$); parents losing their job ($M = 2.939$ for nonexperienced vs $M = 1.545$ for experienced; $t(56) = 2.518$, $p<.0146$) and being sent to the principal's office ($M = 4.295$ for nonexperienced vs $M = 3.00$ for experienced; $t(58) = 2.349$, $p<.0221$).

Table 2.1

Mean Scores for the Stress and Frequency Subscales of the CSAS, and RCMAS by Grade and Sex - Pilot Data.

		Scale					
		Stress		Frequency		RCMAS	
Grade		Boys	Girls	Boys	Girls	Boys	Girls
Grade 1	M	2.364	3.200	22.857	21.375	10.500	14.500
	SD	0.714	0.961	11.067	8.228	5.000	4.593
	N	7	8	7	8	4	6
Grade 2	M	2.887	3.019	27.200	27.333	8.111	11.444
	SD	0.767	0.855	8.867	9.526	5.510	5.364
	N	10	9	10	9	9	9
Grade 3	M	2.832	3.093	26.167	27.375	5.000	12.375
	SD	0.358	0.970	7.333	6.501	7.681	8.501
	N	6	8	6	8	5	8
Grade 4	M	2.864	3.155	32.000	27.571	9.833	13.857
	SD	0.576	0.674	6.325	6.901	5.601	8.050
	N	7	7	7	7	6	7
Totals by Sex	M	2.748	3.113	27.100	25.906	8.292	12.867
	SD	0.653	0.838	8.810	8.034	5.894	6.627
	N	30	32	30	32	24	30

Other items were more stressful if one did have experience with them. These items included kids bugging you (M = 2.120 for nonexperienced vs M = 3.139 for experienced; $t(57) = -2.341$, $p<.0226$) and not understanding something when the rest of the class does (M = 2.04 for nonexperienced vs M = 3.316 for experienced; $t(58) = -3.256$, $p<.0019$).

Pearson product-moment correlation coefficients were calculated for summary scores on the stress questionnaire and the RCMAS. The stress rating subscale and frequency subscale were not significantly correlated (r = .058), nor was the frequency subscale and summary scores on the RCMAS (r = -.005). However, the stress subscale was significantly correlated with scores on the RCMAS (r = .398, $p<.01$). A full model multiple regression analysis was used to predict anxiety scores from ratings on the CSAS (see Appendix E). A linear combination of Grade, Sex, Average stress rating, and Number of stressful events experienced significantly accounted for 22% of the variability in anxiety ratings ($F(4,53) = 3.493$, $p<.014$). Average stress rating was the only significant predictor of anxiety scores (std.beta = .3338, F = 2.541, $p<.014$).

Discussion

A number of tentative conclusions may be drawn from this pilot study. First, when given the opportunity, children in grades one through four can verbalize events which they find to be stressful. When these events were compared to those on traditional stress inventories, two findings became quite apparent. First, for the most part, children reported day-

to-day experiences, rather than major life events. Children reported many events regarding relationships with peers and events in school; two areas virtually ignored by traditional inventories. Second, the CSAS, which incorporates the child's perspective, can predict more of the variability in anxiety scores than the widely-used Coddington scale (1984). Based on these preliminary results, the CSAS represents a potential improvement in the assessment of stress in young children.

CHAPTER III

METHODOLOGY

Subjects

During mid-September, 1986, the total population of students enrolled in Grades 1 though 4 in York Elementary School, York, Maine and their parents (approximately 500 families) were asked to participate in a study of the worries and concerns of elementary school children. Parents were mailed a cover letter describing the study and an consent form to sign (see Appendix F). Students were informed of the study in their classrooms the same day parents received the letters. Families were included in the study only if both parent and child gave their consent. Forty-four percent (218 families) decided to participate.

Table 3.1 lists the demographic characteristics of the sample.

Insert Table 3.1 about here

There were approximately equal numbers of boys and girls, and approximately equal numbers of children at each grade level, with the exception of grade 3 where there were fewer participants. Seventy-five percent of the children were either first or second born. Eighty-eight percent came from two-parent families. Approximately half of the participants

Table 3.1

Sample characteristics

Variable	Number	Percentage
Number		
Children	202	
Parents	194	
Grade		
First	53	26%
Second	56	28%
Third	41	20%
Fourth	52	26%
Sex		
Males	103	51%
Females	99	49%
Family Status		
Two-Parent	177	88%
One-Parent	25	12%
Combined Family Income		
Below 20,000	30	15%
20,000-29,999	31	15%
30,000-49,999	98	49%
Over 50,000	43	21%
Birth Order		
Only	22	11%
First	78	38%
Second	74	37%
Later	28	14%

Education of Parents

	Mother		Father	
Less than H.S.	0	0%	9	4%
High School	57	28%	34	17%
Some college	60	30%	43	22%
College degree	58	29%	75	38%
Advanced degree	26	13%	37	19%

Child's health behavior

Number of Doctor's visits			Days absent from school			
0 visits = 84	42%		0-5	days = 151	75%	
1 visit = 47	23%		6-10	days = 31	15%	
2 visits = 32	16%		11-15	days = 14	7%	
3 visits = 18	9%		16-45	days = 6	3%	
4 visits = 21	10%					

Number participating in retest		
Children	199	98%
Parents	156	80%

had a combined family income of between $30-50,000., thirty percent of participants were below that income, and twenty percent were above.

Materials

The Children's Stress Assessment Scale (CSAS), and the Life Events Scale for Children (LES-C), with Grade and Sex, will serve as predictors of scores on the Revised Children's Manifest Anxiety Scale (RCMAS), Psychosomatic Symptom Checklist (PSC), and Child Behavior Checklist (CBCL). Separate regression models will compare the LES-C with the CSAS as a predictor of mental and physical problems. In addition, scores on the RCMAS, PSC, and CBCL, Grade, and Sex will be employed as predictors of scores on the one-month readministration of the CSAS. Demographic information such as Grade, Sex, Income, Family Status, and Birth Order will serve as independent variables to test for group differences on all questionnaire measures.

Child Measures

The Children's Stress Assessment Scale (CSAS). Results from the initial study were used to make modifications in the CSAS. Ambiguous items and those items three or more standard deviations away from the overall item mean were replaced with child-selected items from the same categories. In addition, the items from the family event and undesirable extrafamilial event categories from Coddington's LES-C (1984) were adapted and added to the CSAS resulting in a total of 67 items. Positive events were not added because length of the scale was an important consideration with young children, and

because positive events have not been significantly related to negative outcomes. Colton's scale (1985) was not employed because it was developed for children in the fourth grade and above.

The 6-point frequency subscale was reduced to three points - never, once/twice, alot. A third subscale scale was added which asked children if the event worried them. They responded by circling "Yes" or "No" depending on their answer (see Appendix G).

Revised Children Manifest Anxiety Scale (RCMAS). (Reynolds & Richmond, 1985). The RCMAS, subtitled "What I Think and Feel," is a 37-item, self-report instrument designed to assess the level and nature of anxiety in children and adolescents from 6 to 19 years old. The child responds to each statement by circling a "Yes" or "No" answer, indicating whether or not the item is generally descriptive of his/her actions and feelings. The "Yes" responses are totaled to obtain a Total Anxiety Score, which may be divided into four subscale scores: physiological anxiety; worry/ oversensitivity; social concerns/concentration; and lie. Reliability and validity data are reported by Reynolds & Richmond (1985).

Psychosomatic Symptom Checklist (PSC). This measure was derived from a compilation of items which load on the Psychosomatic Complaints factor of the Child Behavior Checklist (Achenbach & Edelbrock (1983). The three point rating scale used by parents in the Child Behavior Checklist was modified for children by using the words "Yes, Sometimes,

No" to represent the degree to which a particular symptom may be true for the child. Norms, reliability, and validity data for parent responses are reported by Achenbach and Edelbrock (1981; 1983; see Appendix H).

Parent Measures

The Children's Stress Assessment Scale (CSAS). Parents completed the CSAS with the instructions to "respond to each item as you think your child would respond."

Revised Children Manifest Anxiety Scale (RCMAS). (Reynolds & Richmond, 1985). This is the same child anxiety scale described above which was administered to children. Parents were instructed to "respond to each item as you think your child would respond."

Life Events Scale for Children (LES-C). (Coddington, 1984). This is the scale most widely employed in studies assessing stress in children. Parents were instructed to check which of the 36 life events has occurred in the life of their child during the past 12 months. Weightings for each life event are provided by a panel of professionals. Scores may be obtained for family events, desirable extrafamilial events, undesirable familial events, and total events. Reliability and validity information were reported by Coddington (1984) (see Appendix I).

Child Behavior Checklist (CBCL). (Achenbach & Edelbrock 1983). This measure provides parent report of behavior symptom frequency and severity during the past twelve months. A Total score, as well as scores for Internality and Externality, are based on 113 items. Norms, reliability, and

validity data are reported by Achenbach and Edelbrock (1981; 1983).

Demographics Questionnaire. Demographic information such as the parent's race, income, family status, occupation, and education was obtained. Information regarding the number of days the child was absent from school and the number of nonroutine doctor visits the child made during the previous school year was also be included (see Appendix J).

Procedure

Children

The children were tested in groups of 10-15 during three sixty-minute sessions in October and November, 1986. (However, due to their shorter attention span, First grade children participated in six 30-minute sessions.) Children were seated at individual cubicles to insure confidentiality and to guard against contamination of responses. An assistant was also present during the testing sessions to provide help to students when needed. All questions were read to the students, so that their reading ability would not affect the results. (See Appendix B for more detailed procedural notes on the CSAS administration to the children.)

During the first session, the CSAS was administered. During the second session, two weeks later, the Revised Children's Anxiety Scale and the Psychosomatic Symptom Checklist were given to students to determine the presence or absence of stress-related symptoms and anxiety. Two weeks later, the CSAS was readministered to establish retest reliability over a one-month interval.

Parents

During the same time interval, parents were mailed the CSAS, RCMAS, Coddington's Life Events Scale for Children; the Child Behavior Checklist and a demographic questionnaire, with a cover letter listing the instructions for completing the forms (see Appendix K). Ninety-five percent of the parents returned these completed forms to the experimenter.

The CSAS was then sent out a second time to parents, one month after the initial mailing. The same instructions were given to parents (see Appendix L). This readministraton of the CSAS served to establish retest reliability over a one-month interval. Seventy-seven percent of the parents returned this completed scale.

Data Analysis

Treatment of Missing Data

Prior to analysis, the data set was inspected for the frequency of missing data both by subject and by item. Subjects who had greater than 10 missing data points on any one of the questionnaires were deleted from the analysis. This reduced the sample of children from 218 to 202, and the sample of parents from 218 to 194. There were no systematic trends in missing data in any of the demographic groups.

Items with greater than 10 missing data points were deleted from the analysis as well. Five items from the CSAS fell into this category: First day of school; Parent gets remarried to someone else; Being responsible for a younger brother or sister when parent is not home; Having a new baby brother or sister in family; and Brother or sister dies.

Remaining missing values were replaced by item means. If the variable was dichotomous, the item mean was rounded to the nearest integer before replacement of the missing value.

Data Reduction

Separate factor analyses with varimax rotation were performed on the Stress subscale for both children and parents. For the child-reported data, fourteen factors had eigenvalues greater than one and were retained for component analysis. These factors were not easily interpreted, and this combined with the fact that there was a subject:variable ratio of only 3:1 resulted in abandoning the analysis as a method of data reduction.

Separate summary scores were created for Stress rating, Frequency, and Worry subscales on the CSAS. For the 6-point Stress rating subscale, the mean rating across items was calculated for the summary score. Preliminary analysis of the Frequency subscale revealed that a majority of items did not have normal distributions across the three response categories. The score on each item was then dichotomized into the experience/nonexperience of each event. The summary score for the Frequency subscale was a count of the number of events experienced. For the Worry subscale the summary score consisted of the number of items with affirmative responses (i.e. number of events worried about).

Summary scores were also created for the RCMAS, PSC, CBCL, and Coddington scale. The total number of affirmative responses were calculated for the RCMAS and CBCL and employed as the summary measures. Items on the PSC were scored on a

three point scale: never, sometimes, alot. These categories were assigned values of 0,1,2, respectively. The total score was calculated by summing these values across items. Coddington's scale was summarized by counting the number of events experienced. These summary scores were then employed in the following analyses.

The following four chapters will present the results of the study. Chapter 4 will focus on differences between demographic groups on summary scores for the CSAS and on the anxiety, symptoms, and behavior problem measures. Chapter 5 will present reliability information on the CSAS. Chapter 6 will present validity information including results from the multiple regression analyses. Each of these chapters will discuss results separately for children and parents and then compare the findings from the two samples. Chapter 7 will focus directly on parent and child differences, presenting results on mean differences in magnitude of response and correlational differences in each of the summary measures.

CHAPTER IV

DEMOGRAPHICS

Reported in this chapter are group differences in the CSAS and criterion measures. Independent variables in these analyses were Grade, Sex, Income, Family Status, and Birth Order. This information is presented first for child-reported data and then for parent-reported data. A comparison of the results from these two samples will follow.

Child-Reported Information

Grade and Sex Differences

A multivariate analysis of variance was performed with Grade and Sex as the grouping variables and summary scores for the Stress Rating, Frequency, and Worry subscales of the Children's Stress Assessment Scale (CSAS), Revised Children's Manifest Anxiety Scale (RCMAS), and Psychosomatic Symptom Checklist (PSC) as the dependent measures (see Appendix M for summary table). These results revealed a significant multivariate effect for Sex (Wilks' criterion, $F(5,190) = 6.592$, $p < .001$) with significant univariate effects for the Stress Rating subscale ($F(1,194) = 19.240$, $p < .001$), Worry subscale ($F(1,194) = 22.170$, $p < .001$), RCMAS ($F(1,194) = 17.275$, $p < .001$) and PSC ($F(1,194) = 14.297$, $p < .001$). For all these measures, girls obtained significantly higher scores than did boys. There were no significant Sex effects in the

Frequency subscale. Table 4.1 presents the means for these summary scores grouped by Sex.

Insert Table 4.1 about here

This analysis also revealed a significant multivariate effect for the Sex X Grade interaction ($F(15,524) = 1.872$, $p < .024$) with a significant univariate effect for the Stress Rating subscale ($F(3,194) = 3.71$, $p < .012$). Table 4.2 displays the cell means for this interaction. In general, the average stress rating for boys decreased across grade level, while the average stress rating for girls was maintained at a higher level across grade. This sex difference was significant at Grade 4 where boys reported lower stress ratings than did girls ($F(7,194) = 5.805$, $p < .001$).

Insert Table 4.2 about here

Family Status, Income, and Birth Order Differences

Multivariate analysis of variance was performed on the same dependent measures, but with Family Status as the grouping variable. Family Status was not significantly related to any of the dependent measures. Multivariate analysis of variance was also performed with Income as the grouping variable. The analysis on all the dependent measures listed above revealed no significant differences among Income groups. Birth Order also revealed nonsignificant

Table 4.1
Mean Ratings on the Child Measures By Sex

	Males		Females		
Scale	M	SD	M	SD	Univ. F
Stress	3.326	0.889	3.776	0.767	19.240 *
Frequency	31.641	8.403	33.657	7.392	1.719
Worry	19.903	13.198	27.949	12.390	22.170 *
RCMAS	8.204	6.359	12.303	6.572	17.275 *
PSC	14.350	7.276	18.051	6.458	14.297 *

* $p < .001$

Note: df = 1,194 for all analyses.

Table 4.2

Cell Means for Sex X Grade Interaction in Stress Rating Subscale - Child Data

		Grade			
Sex		Gr.1	Gr.2	Gr.3	Gr.4
Boys	M	3.729	3.416	3.266	2.685
	SD	0.839	0.851	0.815	0.721
Girls	M	3.829	3.805	3.664	3.796
	SD	0.798	0.825	0.723	0.751

effects on the dependent variables (see Appendix N for summary table of these analyses).

Influence of Experience

In order to test whether having experience with an event affected responses, Independent *t* tests and Chi Square analyses were performed comparing the group of children who experienced each item with those who did not. These analyses were performed on both the Stress and Worry subscales. Table 4.3 lists items with significant differences in stress and worry ratings as a result of experience. Because of the number of *t* tests computed and the inflated error rate, alpha was adjusted using the Bonferroni correction. For this set of *t* tests, using a .05 level of significance, the adjusted alpha was set at .001. Only those items which were significant at $p < .001$ are included in the table.

Insert Table 4.3 about here

Parent-Reported Information

Grade and Sex Differences

A multivariate analysis of variance using Grade and Sex as grouping variables and summary scores on the Stress Ratings, Frequency, and Worry subscales, RCMAS, and Child Behavior Checklist revealed no significant differences among groups on these variables (See Appendix O for MANOVA summary table.)

Table 4.3

Influence of Experience - Child Data

Significant Stress Ratings By Experience - Children (N=200)

	Item	t	
12	Hearing noises in dark	3.453	
18	Parents get divorced	-3.734	*
26	Home alone after school without a parent around	-3.974	*

Significant Worry Ratings By Experience - Children

	Item	χ^2	
1	Thinking about ghosts and scary things	21.434	
6	Listening to news events about bad things in world	11.046	
13	Not happy with way you look	26.640	
15	Grandparent/relative seriously ill or dies	10.328	
27	Kids bug/pick on you	12.523	
37	Teacher does not believe You	13.637	
67	Feel nervous/uptight	12.513	
25	Parent loses a job	10.579	*

Note: * Indicates that rating is higher in nonexperienced group.

All other items are rated higher for children who have had experience with the event.

Family Status, Income, and Birth Order Differences

Multivariate analysis of variance on the same dependent variables, but with Family Status as the grouping variable revealed a significant multivariate effect for Family Status (Wilks' criterion $F(5,172) = 6.614$, $p < .001$) with significant univariate effects for the Frequency subscale ($F(1,176) = 29.537$, $p < .001$), Worry subscale ($F(1,176) = 9.934$, $p < .002$), RCMAS ($F(1,176) = 6.222$, $p < .014$), and Child Behavior Checklist ($F(1,176) = 12.777$, $p < .001$).

Inspection of the group means (see Table 4.4) revealed that according to parents, children from single parent families experienced a greater number of stressful events, worried about more events, had higher levels of anxiety, and exhibited more behavior problems than did children from two-parent families.

Insert Table 4.4 about here

A multivariate analysis of variance with the same dependent measures grouped by Income, Grade, and Sex also revealed significant effects. These results indicated a significant multivariate effect for Income (Wilks' criterion $F(15,469) = 2.002$, $p < .014$) with significant univariate effects for the Worry subscale ($F(3,174) = 4.490$, $p < .005$), RCMAS ($F(3,174) = 4.856$, $p < .003$), and Child Behavior Checklist ($F(3,174) = 3.645$, $p < .014$). Table 4.4 lists the means and standard deviations by Income (see Appendix P for summary table of these analyses).

Table 4.4

Mean Parent Ratings by Family Status and Income

Family Status

	Two-parent		One-parent		
Scale	M	SD	M	SD	Univ.F
Stress	3.554	0.626	3.752	0.647	0.366
Frequency	35.947	5.158	43.261	5.553	29.537***
Worry	22.404	11.924	33.174	11.995	9.934**
RCMAS	9.673	5.483	13.273	5.470	6.222*
CBCL	26.112	17.498	46.875	34.451	12.777***

* p <.014 ** p <.002 *** p<.001 df = 1,176

Income

Combined Family Income

Scale		Below $20,000	$20 - $29,999	$30 - $49,999	Over $50,000	Univ. F
Stress	M	3.504	3.615	3.623	3.497	1.188
	SD	0.587	0.768	0.617	0.599	
Frequency	M	39.857	36.926	36.196	36.143	1.639
	SD	5.835	5.098	6.125	4.342	
Worry	M	26.071	29.148	22.701	20.833	4.490**
	SD	11.579	13.985	12.185	11.397	
RCMAS	M	10.630	13.214	9.137	9.791	4.856***
	SD	4.947	6.112	5.232	5.780	
CBCL	M	38.667	36.000	25.151	25.000	3.645*
	SD	30.735	22.119	17.992	17.748	

* p <.014, ** p <.005, *** p <.003 df = 3,174

Multiple comparison tests revealed that parents who had a combined family income of $20,000 to $29,999 reported more worries and higher anxiety scores for their children than did parents who had a combined income of $30,000 or above ($p < .05$). Parents with a combined income of less than $20,000. reported that their children had more behavior problems than did parents who had a combined income of $30,000 or above ($p < .01$). Parents in the income bracket of $20,000 to $29,999 reported more behavior problems in their children than did parents who made over $50,000 ($p < .05$).

Inspection of the demographics revealed that 64% of the single parent families were in the lowest income group. Given this confounding of Family Status and Income, a separate analysis was performed which tested the effects of Family Status in the lowest income group. These Independent t tests revealed that in this income group, Family Status significantly affected parents' rating of the Worry subscale ($t(26) = 2.054$, $p < .05$); Stress subscale ($t(26) = 2.792$, $p < .01$); and Frequency subscale ($t(26) = 2.903$, $p < .007$) of the CSAS. All differences were in the direction of higher scores in the single parent families. Family Status had no effect on any of the child-reported measures, or on parents' rating of anxiety and behavior problems.

There were no significant effects for Birth Order when parent ratings on the dependent measures were analyzed using a multivariate analysis of variance.

Influence of Experience

In order to test whether having experience with an event affected responses, Independent t tests and Chi Square analyses were performed comparing the rating of parents who reported their children had experienced the event and those who did not. These analyses were performed on both the Stress and Worry subscales. Table 4.5 lists the items with significant differences as a function of experience. As with the children's data, the Bonferroni correction was employed. Only those items with significance levels of $p < .001$ were included in the table.

Insert Table 4.5 about here

Coddington's Scale

Separate analyses of variance employing Grade and Sex, Family Status, Income, and Birth Order as grouping variables were performed on the summary score for the Coddington scale. Results revealed a significant main effect for Family Status ($F(1,200) = 26.316$, $p < .001$) indicating that single-parent families had experienced more stressful life events in the past year than did two-parent families ($M = 6.200$ for single-parent family; $M = 3.424$ for two-parent family). There was also a significant main effect for Income ($F(3,198) = 8.322$, $p < .001$). Multiple comparsions revealed that the lowest income group (less than $20,000) had more stressful life events in the past year than did each of the three higher income groups ($F(201) = 8.322$, $p < .001$. $M = 3.726, 2.362,$

Table 4.5

Influence of Experience - Parent Data

Significant Stress Ratings By Experience - Parents (N=194)

Item	t
6. Listening to new events about bad things that happen in the world	4.700
13. Not being happy with the way you look	6.362
19. Having too many things to do	4.323
34. Not having as many toys or clothes as your friends have	4.349
18. Parents get divorced	-4.396 *
26. Being home alone after school without a parent	-5.538 *

Note: * Indicates that rating is higher in nonexperienced group.

All other items are rated higher for children who have had experience with the event.

Significant Worry Ratings By Experience - Parents (N=194)

Item	χ^2
3. You got seriously hurt or had to stay in the hospital	25.084
5. Your pet dies	24.753
11. Teacher/parent thinks you did something wrong when really didn't	25.955
12. Hearing noises in the dark	30.677
13. Not being happy with way you look	48.923
15. Grandparent or other close relative becomes seriously ill or dies	17.703
16. Parents fighting with each other	23.233
18. Parents get divorced	19.819
21. Not having your mom/dad around when you want them	11.128
27. Kids bugging/picking on you	14.663
28. Good friend becomes seriously ill or dies	35.944
30. Kids want you to steal things from stores	36.458
31. Having no friends	57.914
32. Fights with friends	17.350
36. Teacher yelling at you	42.515
37. Teacher does not believe you	52.214
38. Not understanding something when rest of class does	26.300

(Table continues)

Table 4.5 (Continued)

Item	χ^2
43. Getting many answers wrong on a paper	29.489
44. Not getting a good report card	37.863
45. Being sent to the principal's office because of misbehavior	20.049
46. Wetting your pants in school	33.113
49. Moving to a new neighborhood and a new school	36.498
52. Parent has to stay in the hosptial	34.124
56. Having to stay back a year in school	16.466
58. Being picked last on a team	20.723
59. You steal something and get caught	84.815
66. Tried hard to win... didn't come out way you wanted	13.935
8. Trying a new activity that feel a little dangerous	12.372 *
17. Brother or sister becomes seriously ill or hospitalized	30.310 *
19. Having too many things to do	27.521 *
24. Having a new baby brother or sister in family	15.152 *
25. Parent loses job	18.199 *

(Table continues)

Table 4.5 (Continued)

Item	χ^2	
33. Playing on a sports team and people are depending on you	23.980	*
34. Not having as many toys or clothes as friends have	33.940	*
41. Kids correct you when you give an answer in class	23.132	*
53. Grandparent or relative moves into your home	18.737	*
64. Not having as much money to spend on things as used to	23.964	*

Note: * Indicates that rating is higher in nonexperienced group.

All other items are rated higher for children who have had experience with the event.

2.317, 2.175 for the four income groups, respectively). There were no significant main effects for Grade, Sex, and Birth Order (see Appndix Q for the summary table).

Comparison of Child and Parent Information

Several interesting differences emerge when child and parent-reported information are compared. In the child-reported data, Sex of the child was significantly related to stress ratings, worry ratings, anxiety, and symptoms, while Family Status and Income were not. In contrast, parent-reported information revealed Sex of the child not to be a significant factor, but instead significant Family Status and Income group differences were found.

If one considers the salience of different sources of information available to children and parents this pattern of results is not surprising. Sex differences in the self-report of anxiety and psychosomatic symptoms is typical both in children (Douglas & Rice, 1979; Morris, Finkelstein & Fisher, 1976, Reynolds & Richmond, 1978) and in adults (Fiske, 1982; Magnusson, 1982). This is consistent with the strong influence of sex in the children's responses since these are self-report ratings. On the other hand, parents are not making judgments regarding their own feelings, but are inferring the reactions of children. It is possible that from this perspective, the influence of sex may not be as salient for parents as it is for the children themselves.

According to the parent-rated data, variables such as Family Status and Income influenced ratings of stress (as indicated in both the Coddington scale and in the Stress

Questionnaire) and anxiety. This is also consistent with findings in the adult stress literature. For example, Perlin (1982) identified a variety of social conditions that are sources of stress. He reviewed evidence that the incidence of hypertension, cardiovascular ailments, and depression varied with such factors as race, sex, marital status, and income. This socioeconomic variation in diseases would indicate that stress is somehow linked to the conditions that adults confront as they occupy their various positions and statuses in the society. Children do not occupy the same kinds of roles or have the same kinds of responsibilities as adults. Therefore, stress as a function of Family Status or Income may not be as salient to children as stress as a function of their own gender.

CHAPTER V

RELIABILITY

One of the major obstacles in the use of child self-report has been the issue of reliability of responses. The implicit assumption is that the information children provide about themselves is neither reliable nor stable. The adults in the child's world are therefore relied upon to give reports of various aspects of the child's psychological well-being. Rarely is the child's point of view solicited.

This chapter addresses the following issues: 1) How internally consistent are children's ratings of stressful events and reports of anxiety and psychosomatic symptoms? 2) How stable are children's ratings of stressful events over time? These same questions are addressed in the parent's data so that comparisons can be made with children when the same instruments are employed.

Internal Consistency

Table 5.1 lists the Cronbach alpha coefficient for children's reporting (a) and parents' reporting (b) of the Stress, Frequency, and Worry subscales of the CSAS at both Time 1 and Time 2 and the total scores for the Revised Children's Manifest Anxiety Scale and Psychosomatic Symptom Checklist at Time 1.

Insert Table 5.1 about here

Table 5.1

Cronbach Alpha Coefficients for Scales Administered at Both Time Periods

Children's Responses

	Testings	
	Time 1	Time 2
Scale	(N=202)	(N=199)
Stress	.963	.962
Freq	.836	.897
Worry	.944	.961
RCMAS	.854	-----
PSC	.827	-----

Parent's Responses

	Testings	
	Time 1	Time 2
	(N=194)	(N=154)
Stress	.958	.970
Freq	.768	.736
Worry	.932	.944
RCMAS	.797	-----
Codd.	.593	-----

Table 5.2 lists the alpha coefficients for the same measures by grade level for both children (a) and parents (b).

Insert Table 5.2 about here

Comparison of coefficients obtained from parents and children reveal that children are as internally consistent in answering questions about potentially stressful events and anxiety symptoms as parents. In comparing these results across grade levels, parent and child correlations differ by an average of only .0378, and sometimes the children are more reliable.

In order to insure that the children's high reliability was not artificially inflated due to response biases such as circling all the same answers, precautions were taken during the data collection stage. Both the experimenter and assistant watched the children closely as they circled their answers. If a child developed a response bias for a certain answer, he/she was questioned regarding these responses and encouraged to correct the answers if necessary.

Table 5.2

Cronbach Alpha coefficients by Grade Level

Children's Responses

	Grade			
	1	2	3	4
Scale	(N=53)	(N=56)	(N=41)	(N=52)
Stress	.955	.963	.957	.972
Freq	.818	.855	.832	.837
Worry	.943	.933	.943	.953
RCMAS	.891	.882	.889	.913
PSC	.833	.783	.734	.892

Parent's Responses

	Grade			
	1	2	3	4
Scale	(N=51)	(N=54)	(N=41)	(N=48)
Stress	.956	.967	.931	.965
Freq	.748	.810	.741	.716
Worry	.915	.947	.920	.935
RCMAS	.849	.862	.870	.856

Retest Reliability

The results presented in this section address the issue of stability in the child's judgments of stress over the period of one month. Several types of retest information are available for analysis. First, there are the correlations on the summary scores for each subscale of the CSAS, indicating the relative stability of the individual's ratings over time. Second, there are the correlation between the relative position or ranking of items during this month interval, indicating the relative stability of the items themselves over time. Third, there are differences in mean ratings from Time 1 and Time 2 for the summary scores, indicating whether the magnitude of the responses has changed over time. Each of these results will be presented for both children and parents.

Summary Score Reliability Coefficients

Table 5.3 lists the Pearson product-moment correlation coefficients for each of the child-rated summary scores (a) and the parent-rated summary scores (b) in the CSAS. These scores are listed separately by grade and then across grade.

Insert Table 5.3 about here

Table 5.3

Pearson Product-Moment Correlations Across One-Month Retest Interval

Children's Ratings

	Grade				
	1	2	3	4	TOTAL
Scale	(N=51)	(N=56)	(N=41)	(N=51)	(N=199)
Stress	.505	.751	.544	.887	.683
Freq	.762	.417	.455	.768	.619
Worry	.695	.626	.655	.840	.716

Parent's Ratings

	Grade				
	1	2	3	4	TOTAL
Scale	(N=41)	(N=42)	(N=34)	(N=35)	(N=152)
Stress	.752	.839	.715	.763	.759
Freq	.662	.775	.872	.636	.740
Worry	.575	.850	.803	.716	.745

Note: These retest correlations are all significant at $p < .001$.

The children's data indicate that overall, children in Grade 4 had significantly higher retest scores than did children in the lower grades. Their retest coefficients were significantly higher than those obtained for all the lower grades when rating of the Stress subscale was compared (z = 4.046, 3.368, 4.495 for Grades 3 through 1, respectively. All are significant at p <.001). The same pattern was true of the Worry subscale. Children in Grade 4 showed more stability than those in Grades 3, 2, and 1 (z = 1.97, 2.41, 1.735 for these grades, respectively. Significance levels ranged from .02 to .01). In the Frequency subscale, the Fourth grade children were more stable than the Second graders (z = 2.410, p = .008) and Third graders (z = 2.871, p = .0021), but were not significantly different from the First grade children.

For the parents, the retest coefficients for the entire sample did not differ significantly across subscales. When results were compared across grade level, there was no systematic trend for the Fourth grade ratings to be higher than those obtained from the parents of children in the lower grades, as was found in the child-rated data.

Retest coefficients for the entire child and parent samples were compared for each subscale. The reliability of the Frequency subscale in the children's data was significantly lower than that obtained in the parent's data (z = 2.07, p = .038). There were no significant differences between parents and children in the other subscales.

Rank-order Reliability Coefficients

Spearman rank-order correlation coefficients were calculated to indicate degree of stability in the relative position of each item over time. Items rated by children obtained coefficients of .988 for the Stress subscale, .976 for the Frequency subscale, and .926 for the Worry subscale. Items rated by parents obtained scores of .991 for the Stress subscale, .993 for the Frequency subscale, and .969 for the Worry subscale of the CSAS.

Mean Differences in Rating Over Time

Changes in the magnitude of ratings over the one month retest interval were tested by dependent t tests on the summary scores for each subscale. Table 5.4 presents these results for children (a) and for parents (b).

Insert Table 5.4 about here

Table 5.4 indicates that children displayed significant decreases in response to each of the three subscales across a one-month retest interval. Parents' ratings of Stress and Worry subscales also significantly decreased over the one-month interval. However, parents' ratings on the Frequency subscale increased during that same time period.

Table 5.4

Means for CSAS Subscales at Both Time Periods

Children's Responses

Testings

	Time 1		Time 2		
Scale	M	SD	M	SD	t
Stress	3.546	0.859	3.020	0.852	10.920
Frequency	32.629	7.968	29.432	9.908	5.703
Worry	23.847	13.401	19.065	14.691	6.374

Note: Each t test is significant at $p < .001$; df = 198

Parent's Responses

Testing

	Time 1		Time 2		
Scale	M	SD	M	SD	t
Stress	3.577	0.630	3.398	0.674	4.188
Frequency	36.814	5.707	37.179	5.210	2.916
Worry	23.680	12.402	19.545	12.876	4.348

The Stress and Worry subscale differences are significant at $p < .001$. The Frequency subscale is significant at $p < .004$. df = 151.

To summarize, the data presented in this chapter indicate that contrary to popular assumptions, children's responses are highly reliable, and moderately stable over time. Chronbach alpha coefficients for children's responses were comparable to those obtained with parents. Both samples indicated high internal consistency in responding to the CSAS.

The children's retest coefficients for the Stress and Worry scale were also comparable to those of parents, while the coefficient for the Frequency scale was lower. These results are consistent with the average retest coefficient obtained for children and adolescents on measures of psychiatric and behavioral problems (Achenbach et al., 1987). Spearman rank-order coefficients were in the 90's for all subscales. In addition, the children's data displayed more stable responding in the Fourth grade than in the younger grades. This finding is consistent with a developmental trend for increased stability and reliability with increasing age (Anastasi, 1982).

The data on mean differences across time suggests that children were not made more upset (and if anything, less upset) by participation in this study. These results address the concern raised by Coddington (1984) that asking children questions about stress would somehow be harmful. Children displayed significant decreases in response to all subscales on the CSAS, while parents' responses decreased in the Stress

and Worry subscales, and increased in the Frequency subscale. Overall, these results strongly suggest that children are not unreliable or unstable informants of the sources of stress in their lives.

CHAPTER VI

VALIDITY

This chapter focuses on the validity information collected on the CSAS. Specifically, results from child and parent analyses are presented on three types of validity as outlined by Cronbach & Meehl (1955): convergent, divergent and construct validity.

Convergent and Divergent Validity

Table 6.1 presents the intercorrelations among the summary scores for the Stress, Frequency, and Worry subscales of the CSAS and the summary score for Coddington's scale for both children (a) and parents (b).

Insert Table 6.1 about here

As indicated in Table 6.1, none of the child-rated CSAS subscales is significantly correlated with the Coddington scale. However, when the items on the Frequency subscale are divided between those describing life events and those describing hassles, these correlations change. Frequency of life events correlates .286 with the Coddington scale ($p < .001$), and frequency of hassles correlates -.058 with it. This is consistent with the preponderance of life event items on the Coddington scale.

Inspection of the parents' data reveal that the

Table 6.1

Intercorrelations among the CSAS Subscales and Coddington's Scale.

a. Children's Responses

	Time 1				Time 2			
	Stress	Freq	Worry	Codd.	Stress	Freq	Worry	Codd.
Stress	---				---			
Freq	.179	---			.093	---		
Worry	.489	.286	---		.463	.131	---	
Codd.	.035	.024	.091	---	.044	.065	.113	---
	N=202				N=199			

Note: *p <.02; ** p <.01; *** p <.001

b. Parent's Responses

	Time 1				Time 2			
	Stress	Freq	Worry	Codd.	Stress	Freq	Worry	Codd.
Stress	---				---			
Freq	.183	---			.115	---		
Worry	.437	.456	---		.429	.245	---	
Codd.	.049	.395	.306	---	-.028	.339	.189	---
	N=194				N=156			

Note: * p <.02; ** p <.01; *** p <.001

Frequency and Worry subscales are significantly correlated with the Coddington scale. When the items on the Frequency scale are divided between those representing life events and those representing hassles, the correlations between the Coddington scale and these subdivisions of the Frequency scale are .610 and .225 ($p < .001$) for frequency of life events and frequency of hassles, respectively. These results are consistent with the type of items on the Coddington scale.

Construct Validity: Correlations

Children participating in the study were administered the RCMAS and the PSC two weeks after completing the CSAS. Scores on these two scales are considered criteria in the assessment of the predictive validity of the CSAS. Presented in Table 6.2a are the Pearson correlations between children's ratings of the CSAS subscales and the anxiety and psychosomatic symptom measures. Table 6.2b displays Pearson correlations for parents' rating of the CSAS subscales, RCMAS, and CBCL. Also included in this table are the correlations between the criterion measures and the Coddington scale.

Insert Table 6.2 about here

Table 6.2

Pearson Product-Moment Correlation Coefficients for the CSAS Subscales, RCMAS, PSC, and Coddington Scale

a. Children's Responses
(N=199)

	CSAS Subscales						
	Stress		Frequency		Worry		Coddington
Time	1	2	1	2	1	2	----
RCMAS	.369	.549	.368	.291	.574	.486	.117
PSC	.319	.423	.337	.268	.479	.355	.059

Note: All correlations with the CSAS Subscales are significant at p <.001. Neither of the correlations with the Coddington scale is significant.

b. Parent's Responses
(Time 1 N=178; Time 2 N=142)

	CSAS Subscales						
	Stress		Frequency		Worry		Coddington
Time	1	2	1	2	1	2	----
RCMAS	.292	.350	.218**	.178*	.563	.543	.120ns
CBCL	.170*	.172*	.406	.274	.483	.407	.281

Note: All correlations are significant at p <.001, except for those indicated. * p <.05; ** p <.01

As indicated in Table 6.2a, the Time 1 children's ratings of the three subscales in the CSAS are significantly correlated with measures of anxiety and psychosomatic symptoms. Scores on the CSAS retest are also significantly correlated with these measures. However, neither anxiety nor psychosomatic symptoms are significantly correlated with the Coddington scale.

The correlations between the parents' rating of the CSAS subscales and anxiety and behavior problems (Table 6.2b) are significant as well. Parents' rating of anxiety is most highly correlated with ratings on the Stress and Worry subscales. Behavior problems are most highly correlated with the Frequency and Worry subscales. The Coddington scale is significantly correlated with behavior problems, but not with anxiety as rated by the parent.

Table 6.3 presents the correlations between the CSAS subscales and RCMAS and PSC at each grade level for children's ratings (a), and the CSAS subscales and RCMAS and CBCL for parents' ratings (b). The Bonferroni correction was employed due to the high number of correlations. The adjusted alpha was set at $p < .001$.

Insert Table 6.3 about here

The children's data across grade level reveal that the Worry and Stress subscales provide the most consistent pattern of significant correlations with anxiety. The Frequency subscale is significant only for the Fourth grade.

Table 6.3

Pearson Product-Moment Correlations for the CSAS Subscales, RCMAS, PSC, and Coddington's Scale by Grade Level

a. Children's Responses

		Grade Level			
	Time	First	Second	Third	Fourth
Number of Participants	1	53	56	41	52
	2	51	56	41	51
RCMAS X Stress	1	.213	.430 *	.207	.609 *
	2	.472 *	.543 *	.495 *	.659 *
RCMAS X Freq.	1	.383	.298	.243	.549 *
	2	.351	.249	-.070	.545 *
RCMAS X Worry	1	.468 *	.575 *	.637 *	.695 *
	2	.498 *	.497 *	.558 *	.566 *
RCMAS X Codd.	1	.025	-.032	.264	.272
PSC X Stress	1	.052	.375	.324	.521 *
	2	.314	.405	.293	.616 *
PSC X Freq.	1	.349	.264	.456	.397
	2	.269	.268	.061	.450 *
PSC X Worry	1	.286	.417	.524 *	.684 *
	2	.231	.219	.366	.614 *
PSC X Codd.	1	-.177	.053	.042	.270

Note: * p <.001

(Table continues)

Table 6.3 (Continued)

Pearson Product-Moment Correlations for the CSAS Subscales, RCMAS, PSC, and Coddington Scale by Grade Level

b. Parent's Responses

		Grade Level			
	Time	First	Second	Third	Fourth
Number of Participants	1	53	56	41	52
	2	37	39	32	34
RCMAS X Stress	1	.185	.500 *	-.045	.339
	2	.124	.539 *	.040	.567 *
RCMAS X Freq.	1	.117	.239	.329	.212
	2	-.011	.161	.222	.313
RCMAS X Worry	1	.518 *	.593 *	.417	.660 *
	2	.350	.618 *	.562 *	.607 *
RCMAS X Codd.	1	.204	.049	.137	.121
CBCL X Stress	1	.116	.389	-.075	.161
	2	-.018	.551 *	-.132	.066
CBCL X Freq.	1	.341	.345	.574 *	.559 *
	2	.195	.230	.432	.312
CBCL X Worry	1	.426	.548 *	.462	.515 *
	2	.091	.603 *	.419	.361
PSC X Codd.	1	.250	.321	.319	.228

Note: * $p < .001$

Psychosomatic symptoms are most highly correlated with the CSAS subscales at Grade 4. The Coddington scale is not significantly correlated with stress related outcomes at any grade level. Overall, children in the Fourth grade provide the most consistent pattern of significant correlations between the CSAS subscales and stress related outcome measures.

In the parents' data, the Worry subscale is the only subscale which has at least one significant correlation with anxiety at each grade level. The Stress subscale is significantly correlated with outcome measures at Grades 2 and 4. The Frequency subscale is significantly correlated with behavior problems in Third and Fourth graders. The Coddington scale is not significantly correlated with any outcome measure at any grade level. Parents' rating of children in the Second grade produce the most number of significant correlations when compared across all other grades.

Construct Validity: Regression Models

Inspection of the correlations in Table 6.2 reveals that both "criterion" measures were also significantly related to scores on the CSAS subscales at Time 2. As a result, regression analyses were performed in two different ways. First, scores on the RCMAS and PSC were used as criteria with the Time 1 scores on the CSAS subscales as predictors. Second, Time 2 CSAS subscale scores were employed as criteria with anxiety and psychosomatic symptoms as predictors. Both forms of regression were performed

because each one retains the temporal sequence of scale administration and because arguments could be made for both stress as a precursor to anxiety and psychosomatic symptoms and for anxiety and psychosomatic symptoms as precursors to stress.

The regression models for the child-rated data are presented first. These are followed by the regression models for the parent-rated data.

Stress as a Predictor of Anxiety and Psychosomatic Symptoms: Child Data

Table 6.4 lists the full model multiple regression summary table using the three subscales of the CSAS, grade, and sex to predict variability in RCMAS scores (Table a) and in PSC scores (Table b).

Insert Table 6.4 about here

The first regression model accounted for 38% of the variability in RCMAS scores and had as significant predictors the frequency of stressful events, number of events worried about, and sex. Scores on the PSC were less well predicted by the stress questionnaire, grade, and sex. This model accounted 27% of the variability in symptoms with significant predictors being the frequency of stressful events and number of events worried about.

Table 6.4

CSAS Subscale scores (Time 1), Grade, and Sex Predicting RCMAS and PSC Scores for Child-Reported Data.

a. Predicting RCMAS Scores

Variable	Coeff.	Std. Error	Std. Coeff.	T	P(2tail)
Constant	-6.487	2.337		-2.775	0.006
Stress	0.815	0.521	0.103	1.563	0.120
Freq	0.181	0.051	0.213	3.570	0.001
Worry	0.213	0.034	0.422	6.298	0.001
Grade	0.184	0.353	0.031	0.521	0.603
Sex	1.601	0.811	0.119	1.974	0.050

Mult. R:.627; Squared Mult.R:.393; Adj. Sq. Mult. R:.378
Std. Error of Estimate: 5.338
F(5,196) = 25.413, p<.0.001

b. Predicting PSC Scores

Variable	Coeff.	Std. Error	Std. Coeff.	T	P(2tail)
Constant	1.109	2.658		0.417	0.677
Stress	0.708	0.593	0.086	1.194	0.234
Freq	0.200	0.058	0.224	3.469	0.001
Worry	0.174	0.038	0.328	4.536	0.001
Grade	-0.238	0.401	-0.038	-0.594	0.553
Sex	1.647	0.922	0.116	1.786	0.076

Mult. R:.539; Squared Mult.R:.290; Adj. Sq. Mult. R:.272
Std. Error of Estimate: 6.071
F(5,196) = 16.029, p <.0.001

In comparison with these models, Table 6.5 presents two additional regression models employing the Coddington scale, Grade and Sex as predictors of scores on the RCMAS (a) and PSC (b).

Insert Table 6.5 about here

These regressions predicted 9% of the variability in RCMAS and 6% of the variabilty in PSC scores. The only significant predictor in either model was Sex.

Full model multiple regression analyses were performed with the CSAS subscales, Grade, Sex, Income, Family Status, and Birth Order as predictors of scores on the RCMAS and the PSC. Including these demographic variables accounted for an additional 1.5% of the variance in RCMAS scores and .1% of the variance in psychosomatic symptoms. Family Status, Income, and Birth Order were not significant predictors in either regression (See Appendix R for regression tables).

Anxiety and Psychosomatic Symptoms as a Predictor of Stress: Child Data

Table 6.6 presents the summary tables of the full model regression analyses performed separately with Time 2 scores on the Stress (a), Frequency (b), and Worry (c) subscales as criteria. For each regression, scores on the RCMAS and PSC, Grade, and Sex are employed as predictors.

Insert Table 6.6 about here

Table 6.5

Coddington scale, Grade, and Sex Predicting RCMAS and PSC scores for Child-Reported Data.

a. Predicting RCMAS Scores

Variable	Coeff.	Std. Error	Std. Coeff.	T	P(2tail)
Constant	2.966	1.800		1.648	0.101
Codd.	0.292	0.171	0.116	1.711	0.089
Grade	0.036	0.407	0.006	0.087	0.931
Sex	4.065	0.916	0.301	4.438	0.001

Mult. R:.325; Squared Mult.R:.105; Adj. Sq. Mult. R:.092
Std. Error of Estimate: 6.449
F(3,198) = 7.781, p <.0.001

b. Predicting PSC Scores

Variable	Coeff.	Std. Error	Std. Coeff.	T	P(2tail)
Constant	10.885	1.926		5.652	0.001
Codd.	0.126	0.183	0.048	0.691	0.490
Grade	-0.346	0.436	-0.055	-0.794	0.428
Sex	3.793	0.980	0.267	3.871	0.001

Mult. R:.272; Squared Mult.R:.074; Adj. Sq. Mult. R:.060
Std. Error of Estimate: 6.899
F(3,198) = 5.271, p <.0.002

Table 6.6

RCMAS, PSC, Grade, and Sex Predicting CSAS Subscales Scores (Time 2) for Child-Reported Data.

a. Predicting Stress Rating Subscale Scores

Variable	Coeff.	Std. Error	Std. Coeff.	T	P(2tail)
Constant	2.128	0.199		10.672	0.001
RCMAS	0.056	0.010	0.448	5.693	0.001
PSC	0.009	0.009	0.078	1.005	0.316
Grade	-0.104	0.044	-0.139	-2.360	0.019
Sex	0.281	0.105	0.165	2.669	0.008

Mult. R:.588; Squared Mult.R:.346; Adj. Sq. Mult. R:.332
Std. Error of Estimate: 0.696
F(4,194) = 25.621, p <.0.001

b. Predicting Frequency Subscale Scores

Variable	Coeff.	Std. Error	Std. Coeff.	T	P(2tail)
Constant	19.997	2.609		7.666	0.001
RCMAS	0.308	0.130	0.210	2.376	0.018
PSC	0.240	0.122	0.173	1.973	0.050
Grade	2.375	0.579	0.271	4.105	0.001
Sex	-2.331	1.375	-0.118	-1.695	0.092

Mult. R:.416; Squared Mult.R:.173; Adj. Sq. Mult. R:.156
Std. Error of Estimate: 9.104
F(4,194) = 10.123, p <.0.001

(Table continues)

Table 6.6 (Continued)

RCMAS, PSC, Grade, and Sex Predicting CSAS Subscales Scores (Time 2) for Child-Reported Data.

c. Predicting Worry Subscale Scores

Variable	Coeff.	Std. Error	Std. Coeff.	T	P(2tail)
Constant	11.618	3.636		3.196	0.002
RCMAS	0.997	0.181	0.450	5.406	0.001
PSC	0.083	0.169	0.040	0.487	0.627
Grade	-2.293	0.807	-0.177	-2.843	0.005
Sex	1.146	1.916	0.039	0.598	0.550

Mult. R:.519; Squared Mult.R:.269; Adj. Sq. Mult. R:.254
Std. Error of Estimate: 12.690
F(4,194) = 17.838, p <.0.001

These regression models indicate that child ratings of anxiety and psychosomatic symptoms, Grade, and Sex were significant predictors of Stress ratings, Frequency of stressful events, and Worry about stressful events two weeks later; accounting for 33%, 16%, and 25% of the variability in these subscales, respectively. Anxiety ratings, Grade, and Sex were significant predictors of the variability in Stress ratings at Time 2. Anxiety ratings, psychosomatic symptoms, and Grade were significant predictors of the variability in Frequency of stressful events reported at Time 2. Anxiety and Grade were significant predictors of the variability in Worry about stressful events two weeks later.

The results from both sets of multiple regression analyses demonstrate that the assessment of stressful events and anxiety symptoms serve as both significant predictors and as criteria when child-reported information is employed.

Stress as a Predictor of Anxiety and Psychosomatic Symptoms: Parent Data.

Table 6.7 summarizes the full model multiple regression analyses with parent rating of the CSAS subscales at Time 1, Grade, and Sex as predictors of scores on the RCMAS (a) and CBCL (b).

Insert Table 6.7 about here

The first regression model accounted for 33% of the variability in RCMAS scores. Number of events worried about was the only significant predictor. Thirty-four percent of

Table 6.7

CSAS Subscales (Time 1), Grade, and Sex Predicting RCMAS and CBCL Scores for Parent-Reported Data.

a. Predicting RCMAS Scores

Variable	Coeff.	Std. Error	Std. Coeff.	T	P(2tail)
Constant	3.681	3.116		1.181	0.239
Stress	0.759	0.589	0.085	1.289	0.199
Freq	-0.030	0.067	-0.031	-0.453	0.651
Worry	0.259	0.033	0.572	7.778	0.001
Grade	-0.010	0.298	-0.002	-0.034	0.973
Sex	-0.858	0.684	-0.078	-1.255	0.211

Mult. R:.591; Squared Mult.R:.349; Adj. Sq. Mult. R:.331
Std. Error of Estimate: 4.524
F(5,181) = 19.419, p <.0.001

b. Predicting CBCL Scores

Variable	Coeff.	Std. Error	Std. Coeff.	T	P(2tail)
Constant	-16.326	12.004		-1.360	0.176
Stress	1.778	2.280	0.051	0.780	0.436
Freq	1.016	0.259	0.269	3.928	0.001
Worry	0.688	0.130	0.390	5.274	0.001
Grade	-1.935	1.170	-0.101	-1.654	0.100
Sex	-6.656	2.658	-0.154	-2.504	0.013

Mult. R:.601; Squared Mult.R:.361; Adj. Sq. Mult. R:.343
Std. Error of Estimate: 17.550
F(5,179) = 20.242, p <.0.001

the variability in CBCL scores was accounted for by parents' rating of the stress questionnaire, grade, and sex. Number of stressful events experienced, number of events worried about, and sex were significant predictors.

In comparison with these models, Table 6.8 presents two more regression models employing the Coddington scale, Grade and Sex as predictors of parent ratings of the RCMAS (a) and CBCL (b).

Insert Table 6.8 about here

These regressions predicted .6% of the variability in RCMAS and 15% of the variabilty in CBCL scores. There were no significant predictors for RCMAS scores, although the Coddington scale approached significance ($p<.054$). However, the Coddington scale was a significant predictor of scores on the CBCL.

Full model multiple regression analyses were performed with the CSAS subscales, Grade, Sex, Income, Family Status, and Birth Order as predictors of scores on the RCMAS and the CBCL. The inclusion of these demographic variables accounted for an additional .6% of the variance in RCMAS scores and 2% of the variance in CBCL scores. None of these additional demographic variables were significant predictors in either regression. (See Appendix 5 for regression summary tables).

Table 6.8

Coddington scale, Grade, and Sex Predicting Scores on the RCMAS and CBCL for Parent-Reported Data

a. Predicting RCMAS Scores

Variable	Coeff.	Std. Error	Std. Coeff.	T	P(2 tail)
Constant	7.932	1.598		4.964	0.001
Codd.	0.314	0.161	0.141	1.941	0.054
Grade	0.280	0.358	0.057	0.783	0.434
Sex	0.203	0.809	0.018	0.251	0.802

Mult. R:.147; Squared Mult.R:.022; Adj. Sq. Mult. R:.006
Std. Error of Estimate: 5.569
F(3,189) = 1.398, p <.0.245

b. Predicting CBCL Scores

Variable	Coeff.	Std. Error	Std. Coeff.	T	P(2 tail)
Constant	22.124	5.715		3.871	0.001
Codd.	3.212	0.545	0.397	5.894	0.001
Grade	0.738	1.278	0.039	0.577	0.565
Sex	-4.810	2.857	-0.113	-1.683	0.094

Mult.R:.408; Squared Mult.R:.167; Adj. Sq. Mult. R:.153 Std. Error of Estimate: 19.677
F(3,189) = 12.588 p <.0.002

Anxiety and Psychosomatic Symptoms as a Predictor of Stress: Parent Data.

Table 6.9 presents the summary tables for full model regression analyses employing parent-rated Time 2 scores on the Stress (a), Frequency (b), and Worry (c) subscales as criteria. Scores on the RCMAS and CBCL, Grade, and Sex are predictors. Summary tables of these analyses are presented in Table 6.9.

Insert Table 6.9 about here

These regression models indicate that parent ratings of anxiety and psychosomatic symptoms, Grade, and Sex were significant predictors of Stress ratings, Frequency of stressful events, and Worry about stressful events two weeks later; accounting for 11%, 8%, and 27% of the variability in these subscales, respectively. Anxiety rating was a significant predictor of the variability in Time 2 Stress ratings. Behavior problems was a significant predictor of the variability in Frequency of stressful events at Time 2. Anxiety was a significant predictor of the variability in Worry about stressful events two weeks later.

The results from both sets of multiple regression analyses demonstrate that, as in the children's data, assessment of stressful events and anxiety symptoms serve as both significant predictors and as criteria when parent-reported information is employed.

Table 6.9

RCMAS, CBCL, Grade, and Sex Predicting CSAS Subscale Scores for Parent-Reported Data

a. Predicting Stress Rating Subscale Scores

Variable	Coeff.	Std. Error	Std. Coeff.	T	P(2tail)
Constant	2.825	0.211		13.383	0.001
RCMAS	0.043	0.011	0.369	3.818	0.001
CBCL	-0.002	0.004	-0.059	-0.609	0.543
Grade	-0.021	0.047	-0.036	-0.443	0.659
Sex	0.167	0.105	0.126	1.584	0.115

Mult. R:.367; Squared Mult.R:.134; Adj. Sq. Mult. R:.110
Std. Error of Estimate: 0.624
F(4,141) = 5.474, p <.0.001

b. Predicting Frequency Subscale Scores

Variable	Coeff.	Std. Error	Std. Coeff.	T	P(2tail)
Constant	33.974	1.672		20.319	0.001
RCMAS	0.031	0.088	0.034	0.349	0.728
CBCL	0.087	0.029	0.291	2.940	0.004
Grade	0.628	0.375	0.137	1.675	0.096
Sex	-0.697	0.833	-0.068	-0.837	0.404

Mult. R:.327; Squared Mult.R:.107; Adj. Sq. Mult. R:.082
Std. Error of Estimate: 4.946
F(4,141) = 4.231, p <.0.003

(Table continues)

Table 6.9 (Continued)

RCMAS, CBCL, Grade, and Sex Predicting CSAS Subscale Scores for Parent-Reported Data

c. Predicting Worry Subscale Scores

Variable	Coeff.	Std. Error	Std. Coeff.	T	P(2tail)
Constant	8.632	3.681		2.345	0.020
RCMAS	1.011	0.195	0.456	5.192	0.001
CBCL	0.071	0.065	0.097	1.095	0.275
Grade	-1.299	0.826	-0.115	-1.573	0.118
Sex	1.414	1.833	0.056	0.771	0.442

Mult. R:.535; Squared Mult.R:.287; Adj. Sq. Mult. R:.266
Std. Error of Estimate: 10.887
F(4,141) = 14.170, p <.0.001

Descriptive Comparison of Child and Parent Regression Models

There are a number of differences between children and parents when one assesses the validity of the CSAS. First, inspection of the correlations among subscales of the questionnaire indicate differences between parents and children in the relationship between Worry and Frequency. Parents' correlations indicated a stronger relationship between the experience of stressful events and worry about stressful events than did children. However, for both parents and children, stress ratings and worry ratings were significantly related, while stress ratings and frequency of occurrence were not.

Second, the relationship between the CSAS and the Coddington scale was stronger in parents than in children, for both total events and life events experienced. However, parents and not children, completed the Coddington scale.

Third, the Stress, Frequency, and Worry subscales on the CSAS were significantly related to anxiety and symptoms for both parents and children. Both samples displayed the highest correlation between these symptoms and the Worry scale.

Fourth, multiple regression analyses indicated that use of the CSAS, Grade, and Sex information predicted 38% of the variability in anxiety scores using child-reported information and 33% using parent-reported information. Child-reported information predicted 27% of the variability in psychosomatic symptoms, while parent-reported information

predicted 34% of the variability in behavior problems. Use of the Coddington scale accounted for between 1% and 15% of the variability in these same outcome measures. Thus, use of either the child or parent as informant on the CSAS significantly outperformed the Coddington stress scale. Also, for both child and parent, demographic variables such as Family Status, Income, and Birth Order provided no additional predictive power.

Fifth, in addition to serving as criterion variables, anxiety and psychosomatic symptoms were significant predictors of stressful events rated two weeks later. The pattern of results was similiar for both parent and-child rated data in predicting frequency of events and worry about events at Time 2. A larger percentage of variability in stress ratings was predicted by children (33%) than by parents (11%). Overall, both parent and child models argue for the interactive nature of stress and illness.

CHAPTER VII

PARENT AND CHILD DIFFERENCES

In this chapter differences between parents and children in their perception of childhood stress are compared. First, differences in the magnitude of responses to stress and anxiety measures are assessed across parent and child groups. Second, child-reported and parent-reported information are correlated to determine the degree of association between these two groups.

Group Differences

Summary Scores

Table 7.1 presents child and parent means and standard deviations for the summary scores for the stress, worry, and frequency subscales in the CSAS, and for the RCMAS.

Insert Table 7.1 about here

Dependent *t* tests between parents and children for each of these variables revealed that only the means on the Frequency subscale were significantly different; parents reported the occurrence of more stressful events than did children ($t(193) = 6.391$, $p < .001$).

Table 7.1

Means and Standard Deviations for Measures Completed by both Parents and Children

	Rater				
	Child		Parent		
Scale	M	SD	M	SD	t
Stress	3.546	.859	3.577	.630	0.443
Freq	32.629	7.968	36.814	5.707	6.391 *
Worry	23.847	13.401	23.680	12.402	0.045
RCMAS	10.213	6.768	10.083	5.587	0.126

Note: * $p < .001$ $df = 193$ for all comparisons.

Item Analyses

Parent and child differences in the mean ratings for each item were also tested by Dependent *t* tests and McNemar Symmetry Chi Square tests. Table 7.2a lists the events for which parents and children gave significantly different Stress ratings. Table 7.2b lists those events for which parents and children gave significantly different Frequency ratings. Table 7.2c presents items for which parents and children gave significantly different Worry ratings. Because of the number of *t* and Chi Square tests computed and the inflated error rate, alpha was adjusted using the Bonferroni correction. For the set of *t* and Chi Square tests (*n*=67) using a .05 level of significance, the adjusted alpha was set at .001. Only those items with $p < .001$ were included in the tables. A complete listing of the means and standard deviations for each item in the Stress, Frequency, and Worry subscales as rated by children and by parents, is provided in Appendix T.

Insert Table 7.2 about here

Table 7.2

Item Differences Between Parents and Children

a. Stress Ratings
(N=194)

Parent Gives Higher Rating			Child Gives Higher Rating		
	Event	T		Event	T
1.	Thinking about ghosts and scary things	3.245	22.	Being responsible	4.712
2.	Watching a scary TV show	5.753	42.	Forget to do work supposed to do	3.452
10.	Getting lost	3.506	44.	Not getting a good report card	4.047
11.	Parent/teacher thinks you did something wrong when you didn't	5.394	45.	Sent to the principal's office	3.590
12.	Hearing noises in the dark	4.119	51.	Perform in front of others	3.751
14.	Grandparent/Rel.dies	4.489	65.	Stranger wants to talk with you	4.430
16.	Parents fighting with each other	4.557	52.	Parent is has to stay in hospital	3.615
18.	Parents get divorced	4.978	53.	Grandparent/rel. moves into home	4.199
33.	Playing on sports team with people depending on you	4.978	55.	Parent remarries after a divorce	5.547
37.	Teacher does not believe you	3.701			
57.	Losing a game	3.271			
61.	Brother/sister dies	6.798			
62.	You start to go blind	3.231			

b. Frequency Ratings
(N=194)

Parent Gives Higher Rating			Child Gives Higher Rating		
	Item	χ^2		Item	χ^2
1.	Thinking about ghosts and scary things	37.735	3.	You got hurt or had to stay in hosp.	21.278
2.	Watching a scary TV	18.615	15.	Grandparent/rel. seriously ill/dies	10.646
8.	Trying new activity that feels dangerous	18.050	22.	Responsible for younger sibling when parent not home	33.534
11.	Parent/teacher thinks you did something wrong and you didn't	26.450	24.	New baby brother/ sister	11.000
12.	Hearing noise in dark	15.517	28.	Good friend gets seriously ill/dies	10.526
13.	Not happy with way	10.133			

(Table continues)

Table 7.2 (Continued)

Parent Gives Higher Rating		Child Gives Higher Rating	
Item	χ^2	Item	χ^2
you look		30. Kids want you to steal things from stores	12.448
16. Parents fighting with each other	23.203		
20. Brother/sister bugging you	10.704		
21. Not having Mom/Dad around when want them	15.517		
23. Parent does not let you do things	15.207		
27. Kids bugging/picking on you	34.306		
32. Fights with friends	15.291		
34. Not having as many toys/clothes as friends have	15.044		
36. Teacher yells at you	11.967		
38. Make mistake in front of others	43.215		
42. Forget to do work supposed to do	46.878		
51. Performing in front of others	17.254		
57. Lose a game	46.538		
63. Arguments with your parents	65.058		
65. Stranger wants to talk with you	33.779		
66. Tried hard to win but didn't come out way you wanted	44.085		

c. Worry Ratings
(N=194)

Parent Gives Higher Rating		Child Gives Higher Rating	
Item	χ^2	Item	χ^2
2. Watching scary TV show	20.253	3. You got hurt or had to stay in hosp.	21.278
12. Hear noise in dark	14.735	5. Your pet dies	28.409
27. Kids bug/pick on you	21.592	14. A parent dies	17.778
35. Parent yells at you	17.391	15. Grandparent/rel. seriously ill/dies	17.778
36. Teacher yells at you	35.438		
38. Make mistake in front of other kids	22.588	17. Sibling seriously ill or hospitalized	56.627

Table 7.2 (Continued)

Parent Gives Higher Rating		Child Gives Higher Rating	
Item	χ^2	Item	χ^2
40. Not understanding something when rest of class does	11.000	18. Parents divorce	11.796
43. Getting many answers wrong	26.510	22. Responsible for younger sib when parent is not home	21.429
47. Taking tests	12.500	24. New baby brother/ sister in family	14.400
51. Perform in front of others	18.253	28. Good friend gets seriously ill/dies	59.259
57. Lose a game	21.622	30. Kids want you to things from stores	72.000
58. Picked last to be on a team	18.753	45. Sent to principal's office	21.160
63. Having arguments with parents	16.011	46. Wetting your pants in school	12.812
66. Tried hard but did come out way you wanted	45.474	52. Parent is has to stay in hospital	27.272
		55. Parent gets remarried after a divorce	21.831
		59. You steal and get caught	26.978
		61. Brother/sister dies	31.021
		62. You start to go blind	40.953

Correlational Differences

Summary Scores

This section deals with the relationship between parent and child ratings of stress and anxiety in the child. Table 7.3 presents the Pearson correlation coefficients between parents and children for the summary scores on the CSAS subscales and the RCMAS. These are presented for the entire sample and by grade level.

Insert Table 7.3 about here

The correlations for the entire sample indicate that overall, parents and child responses are not significantly correlated. Ratings on the RCMAS were slightly higher than ($p < .05$).

When these same correlations were computed within each grade, no systematic improvements in parent and child agreement were evident as Table 7.3 indicates. Curiously, parents and children agree somewhat on Worry and Anxiety ($p < .05$) in Grade 2.

Table 7.3

Pearson Correlations between Parents and Children For CSAS Subscales and RCMAS by Grade Level

	Grade				
Scale	1	2	3	4	Total
	(N=49)	(N=51)	(N=39)	(N=48)	(N=187)
Stress	-.006	.135	.003	.142	.065
Freq	-.047	.150	-.072	.173	.072
Worry	.114	.281 *	.129	-.090	.078
RCMAS	.143	.311 *	.179	.045	.170 *

Note: * p <.05

The individual items were rank-ordered within each of the subscales in the CSAS. Appendix U presents these items ranked from highest to lowest in each subscale for both parent and child samples. Spearman correlation coefficients were then computed on the ranks so that the relative position of these items could be quantified across parent and child informants. The results of this analysis are presented in Table 7.4.

Insert Table 7.4 about here

Using this rank-order procedure, parent and child agree closely on the relative stressfulness of events (r = .91) and on the relative frequency with which these events occur (r = .92). Parents and children do not agree as highly on the relative position of events worried about most (r = .26), although this correlation is significant (p <.05). Also of note is the difference in the correlations between Frequency of events and Worry about events. For children, the experience of an event and worry about it are negatively correlated (r = -.401), whereas for parents, the experience of an event is postively correlated with worry about it (r = .511). In addition, Stress ratings and Worry ratings are highly correlated for child responses (r = .791), but not as strongly correlated for parent responses (r = .279).

Table 7.4

Spearman rank-ordered Correlation Coefficients Comparing Parent and Child Ratings of the CSAS Subscales
(N=67)

		Rater					
		Child			Parent		
		Stress	Freq	Worry	Stress	Freq	Worry
Child	Stress	----					
	Freq	-.604	----				
	Worry	.791	-.401	----			
Parent	Stress	.910	-.470	.763	----		
	Freq	-.569	.920	-.374	-.442	----	
	Worry	.193	.372	.260	.279	.511	----

Note: + p <.05
* p <.02
** p <.01
*** p <.001

The relationship between ratings on the CSAS and on the outcome measures were investigated for parent and child samples. Table 7.5 lists the correlations between these ratings.

Insert Table 7.5 about here

This pattern of correlations indicates that child rating of the CSAS is significantly associated with child rating of outcome measures. Parent rating of the CSAS is significantly associated with parent rating of the outcome measures. However, correlations drop to near zero when child CSAS ratings are measured against parent-rated outcome measures. This is also true when parent CSAS ratings are measured against child-rated outcome measures as well.

There are at least two possible explanations for why the CSAS and anxiety and symptoms are correlated within parent and child informants, but not across informants. First, items on the CSAS and the anxiety and psychosomatic symptom scales might be part of the same underlying construct which may not be the same for child and adult informants. Adults are responding to the CSAS from the perspective of adult stress (which, for example, may be related to the frequency of major life events, role strains, and hassles) and children are responding in terms of child stress, however that is to be construed. If different informants were

Table 7.5

Pearson Correlations Comparing Parent and Child Ratings of the CSAS Subscales and the RCMAS

		Rater			
		Child		Parent	
	Scale	RCMAS	PSC	RCMAS	CBCL
Child-Rated	Stress	.379***	.326***	.091	-.004
	Freq	.376***	.371***	-.006	-.014
	Worry	.564***	.457***	.101	.064
Parent-Rated	Stress	-.062	-.088	.292***	.170*
	Freq	.148	.000	.218**	.406***
	Worry	.126	.009	.563***	.483***

Note: * $p < .05$
** $p < .01$
*** $p < .001$

employed in responding to a single scale and these informants did not share the same underlying construct, then the correlation between the informants would not be high.

A second explanation is the possiblity there are two separate systems operating; that of the child and that of the parent. As long as variables are measured within the same system, significant relationships are obtained. Perhaps the world of the child and the world of the adult are so different that high correlations are not possible. Developmental theory, and the marked intellectual, social and biological differences between parents and child, would argue persuasively for this approach.

It is clear that the data indicates very low correlations between parents and children when reports of stress and anxiety are measured. It is not clear why these differences occur.

CHAPTER VIII

DISCUSSION

The results from this study have implications for several issues in childhood stress. The Children's Assessment of Stress Scale (CSAS) represents a significant improvement in stress assessment by providing elementary school children with the opportunity to report on their own feelings and sources of stress. Insight has been gained into the nature of stress from the child's perspective. Differences between parent and child perceptions of childhood stress have been quantified. Finally, relationships between stressful events and anxiety have been documented in children under 10 years of age.

Psychometric Properties of the CSAS

One of the basic issues in studying childhood stress is the reliability and validity of child-reported information. An underlying assumption has been that children are unreliable informants regarding events in their lives and feelings associated with those events. The results from this study strongly challenge this assumption. The present data indicate that children ages 6 to 10 years can provide responses which are internally consistent (alpha for subscales from .84 to .96), moderately stable over time (test-retest r for subscales from .60 to .71) and predictive of anxiety and psychosomatic symptoms (29% of variability in psychosomatic symptoms, 39% of variability in anxiety

scores).

These results are comparable to other stress scales which were designed for older children. In terms of internal consistency, Colton (1985) obtained a Chronbach alpha of .84 for individual factors with children in grades 3 to 6, and Lewis et al (1984) obtained a Cronbach alpha of .82 for their "badness" scale with fifth grade children. Several authors have reported retest reliability of stress scales with older children. Coddington (1984) reported retest coefficients of .69 at three months, .67 at seven months, and .56 at eleven months with the Life Events Scale for Adolescents. Brand and Johnson (1982) obtained a retest reliability coefficient of .69 for positive events and .72 for negative events over a two week period using the Life Events Checklist designed for children ages 10-17.

Other psychological scales normed for younger children have yielded similar results as well. Saylor, Finch, Spirito, and Bennet (1984) report an alpha coefficient of .94 and retest coefficient of .69 for the Children's Depression Inventory. Reynolds and Richmond (1985) reported an internal consistency of .83 and retest coefficient of .68 over nine months for the Revised Children's Manifest Anxiety Scale. Edelbrock, Costello, Dulcan, Kalas, and Conover (1985) found retest reliability over a 2-3 week period in a structured diagnostic interview to become more stable with age. Retest coefficients for anxiety symptoms were .49, .54, and .77 for children ages 6-9, 10-13, and 14-18 years, respectively.

Several gender differences emerged in the ratings of

stress and anxiety in the present study. Girls gave significantly higher stress ratings, worried about more events, reported more psychosomatic symptoms, and obtained higher scores on the RCMAS than did boys. Other studies have reported similiar findings with girls reporting more symptoms and anxiety than did boys (Douglas & Rice, 1979; Morris, Finkelstein, & Fisher, 1976; Reynolds & Richmond, 1978). The only stress scale reporting sex differences was the Feel Bad scale (Lewis et al., 1984) in which girls rated items as worse overall than did boys. Neither Yamamoto (1979, 1982) nor Colton (1985) found any sex differences in their data.

Grade level was not strongly related to the stress ratings in the present study. This was also true of the ratings in Yamamoto's questionnaire (1979, 1982) and in Colton's scale (1985). Experience with an event had mixed effects in the current study. For many events, especially those involving a major life event, experience was associated with lower stress ratings than was no experience. Overall, there was a general tendency for infrequently experienced major life events to receive high worry ratings. Lewis et al. (1984) also found that events which had not occurred produced worry. For example, children whose parents had never separated and children who had never been pressured to try something new rated these events as worse than those who had actually experienced the events. Apparently, first-hand experience with a stressful event was not the only source of stress for the child. Concern over potential stressful events produced worry in children as well.

Thus, the results indicate that the CSAS, which was designed for for children in grades one through four, is comparable to scales designed for older children. It meets the same psychometric criteria as other stress and anxiety scales, while appropriate for a younger age group. It is possible for young children to give reliable and valid reports of stress and anxiety. Current adult-based assumptions as to what is stressful to children need not take precedence over, or stand in lieu of, the responses of children themselves.

The Nature of Stress in Childhood

The nature of stress in childhood has been discussed in both the academic and popular press. Both sources have relied heavily on adult-based perceptions of what is stressful to children. For example, according to Coddington (1972, 1984) stress is associated with major life changes. These changes could be either positive or negative and mainly result from events which originate in the family. Events involving school (except for the first day of school, or repeating a grade), those involving peers, or inner feelings of insecurity or doubt are ignored as sources of stress for the child. The child's life is seen as a reflection of the parent's life.

According to Elkind's popular book, The Hurried Child (1981), "Today's child has become the unwilling, unintended victim of overwhelming stress" (p. 3). Elkind gave examples of the way adults, and especially parents, hurry their children through childhood. These included pressuring

children for early intellectual attainment, dressing children like adults, sending children to specialized summer camps, having children participate in competitive sports at a young age, and exposing them to music, books, films, and TV which "force children to think they should act grown up before they are ready" (p.10). According to Elkind, "...it is the feeling of being used, of being exploited by parents, of losing the identity and uniqueness of childhood without just cause that constitute the major stress of hurrying and account for so much unhappiness among affluent young people today" (p.21). It is disconcerting, however, that despite the authoritative tone, these conclusions were drawn without ever systematically questioning a normal population of children for their views on stress.

When given the opportunity, what do children say are the sources of stress in their lives? Issues that recurred in the discussion groups of the present study included items such as a good friend gets hurt, the child him/herself gets hurt or does something dangerous, being kidnapped, getting lost, strangers, upsetting news events, pressure to steal, parent or teacher yelling, being unjustly accused of wrongdoing, forgetting to do things, not understanding something when rest of the class does, kids picking on you, not having any friends, to name a few.

The actual experience of events such as having no friends, not being happy with the way you look, trying a dangerous activity, and being unjustly accused of wrongdoing were significantly correlated with anxiety and psychosomatic

symptoms. In addition, reported worry and concern about getting many answers wrong, arguments with parents, fights with friends, not being happy with appearance, being unjustly accused, and parent yelling were among the top worries significantly associated with negative health outcomes as well (See Appendix V).

These events were similar to those mentioned by children in grades 3 through 6 (Colton, 1985) and have been given in reponse to the question put to 5th and 6th graders, "What makes you feel bad, nervous, or worry?" (Lewis et al, 1984).

Interestingly, many of the items mentioned by children in the 1980's also appeared in studies of the "worries of school children" conducted in the late 1930's and early 40's. For example, Zeligs (1938) asked 5th and 6th grade children to list 3 things that worry them most. She found the most common worries to be about health, safety, and school work. The ten top worries included health of family members, school marks and reports, when people are hurt, school work, tests in school, there might be a war, people might die, passing to the next grade, my own health, may not satisfy my mother. She found girls worried much more than boys, especially about school and safety.

Pinter and Lev (1940) found that 5th and 6th grade children worried most about family and school. Failing a test was the number one worry and 90% of children worried about it happening. Getting a poor report card was a concern to 70% of children, as was being late for school. Forty-five percent worried about being kidnapped, 40% worried the world

would come to an end, 75% worried about being accused unjustly, 52% worried about a death in the family. Jersild, Goldman, and Loftus (1941) also found failing a test to be the number one worry of 5th and 6th graders with 80% concerned about it. These were followed by parent yelling (75%), bad report card (72%), and teacher yelling (66%).

It is tempting to compare the results of the present study on childhood stress with those conducted over 45 years ago. Despite the time difference, the methodologies employed are very simliar. For example, Zeligs (1938) asked 6th graders to list the three things that worry them most. These worries were tabulated and formed the basis of a questionnaire on children's worries which had a three point response scale: "no, sometimes, yes." Pinter & Lev (1940) and Jersild et al. (1941) also employed questionnaires which asked children to circle the word which best described the extent to which the child worried about the event in question. The inventories contained between 25 and 53 questions and had a response format of "often, sometimes, or never." Bearing in mind the age differences of the children in the present study with those in the older studies, several general comparisons can be made.

It appears that 45 years ago, a greater percentage of children reported worry about various issues than in the present study. Also, children appeared to be much more concerned with school issues and academic performance in the early 1940's. However, children were less concerned with kidnapping than they are today. Issues such as losing

friends, being made fun of, fear of something bad happening in the world, and strangers following you had very similiar ratings with the present study. Although, some items of the 1940's seem very different from those today. For example, having bad manners was a cause of worry for 54% of children, being late for supper worried 65% of children, and talking too much worried 55% of children. Conversely, major life events so prevalent on stress scales today were for the most part absent, as were issues about stealing, being home alone, being bored, and having too many things to do.

Thus, from a historical perspective, it is very difficult to decide if today's children are being "hurried" anymore than those of the past. For example, cross-generational differences in attitudes, values, social conventions, economic conditions, and parenting styles make comparisons with past generations complex. Statements regarding the relatively greater stress of today's children must take these factors into account.

Given the actual responses of children, one is left with the task of interpreting and characterizing the experience of stress in childhood. Looking to the literature on sources of stress in adults can provide some suggestions. Stress in adults has been attributed to major life events (Holmes & Rahe, 1967); chronic role strains (Perlin & Lieberman, 1979); and hassles (Delongis et al, 1982). The items suggested by children appear to be most consistent with chronic role strains or hassles. According to Lewis et al. (1984), more of the problems children reported in his study were of an

enduring nature which had no specific onset in time and were best described as chronic role strains. Colton (1985) described the items she obtained as hassles or irritants which are daily events associated with stress. It is troubling however, that both researchers are referring to similiar, if not identical items, but interpreting them in a somewhat different way.

Literature on prevention of mental health disorders highlights the role of adjustments that the child must make. According to Felner (1984), these adjustments necessitate modifications and changes in relationships with peers and adults in the child's life. The items mentioned by children might be considered adjustments that children are required to make in the course of their life.

In addition, developmental theorists such as Erikson (1963) have described the conflict of industry vs inferiority as the major psychosocial crisis of middle childhood. It is at this time that children begin to be compared and evaluated in a wide variety of areas such as academics, athletic ability, physical appearance, popularity, and expression of talents. Children are revising self-concepts to include abilities in a number of areas. From Erikson's theory, it is not surprising that having no friends, or being embarrassed about appearance or being unjustly accused or getting many answers wrong or being yelled at are stressful. They are all threats to the child's developing sense of self-esteem.

Maslow's theory of the hierarchy of human needs (1954) provides an interesting perspective from which to describe

the nature of childhood stress. Perhaps stress derives from threats to basic human needs such as physiological needs, safety needs, love and belonging needs, self-esteem needs, cognitive needs, and self-actualization needs. In the present study, a majority of the items suggested by children could be classified as threats to either safety, love and belonging, or self-esteem, or to a combination of those needs. Perhaps if a sample of children from a lower socioeconomic status participated in the study, they would have identified threats to physiological needs as a major source of stress. Maslow's classification scheme could also apply to the items mentioned by children 45 years ago.

Each of these perspectives: chronic role strains, hassles, adjustments, threats to self-esteem, threats to basic needs could provide insight into the underlying nature of childhood stress. In addition, employment of multidimensional scaling or clustering techniques with a larger sample would provide a statistical basis for classification. At this point, there is no compelling evidence for any one classification scheme over any other. This task awaits further research.

Differences Between Parents and Children

One of the most striking findings in this study was the lack of agreement between parents and children regarding ratings of stress, frequency of events, worry about events, and level of anxiety. The correlations between parents and children on these measures ranged from .065 to .170 and did not vary with increasing grade. The only variable with a

group difference however was the frequency of events experienced. Parents felt children experienced significantly more events than children said they did. Rank-ordering of events reflected greater agreement in the Stress and Frequency subscales, but not in the Worry subscale. In addition, parents' ratings were related to Family Status and Income, while Grade and Sex differences were found in children's ratings. All of these findings taken together suggest that parents and children have somewhat different perspectives on the sources of stress and experience of anxiety symptoms in childhood.

This lack of adult-child convergence has been documented in studies of stress employing older children (Colton, 1985; Coddington, 1984; Yamamoto & Felsenthal, 1982). The finding has also emerged in parent and child reports of psychiatric symptoms (Achenbach et al., 1987; Edelbrock, Costello, Dulcan, Conover, & Kala, 1986; Herjanic & Reich, 1982; Kazdin, Esvekdt-Dawson, Unis, & Rancurello, 1983; Kazdin, French, & Unis, 1983; Weissman, Orvaschel, & Padian, 1980).

This lack of agreement between parents and children could be due to the contribution of at least two factors: (1) statistical differences between the responses of young children and adults, and (2) psychological differences in the perspectives taken by these two groups.

According to the statistical argument, children tend to produce answers which are more variable than those of adults. This variability would be reflected in responses which are less internally consistent and less stable over time. When

these measures obtained from children are correlated with those obtained from adults, attenuation of the relationship would result.

Research conducted using structured psychiatric interviews of parents and young children have demonstrated moderate increases in agreement with increasing age of the child. Edelbrock et al (1986) found that correlations between parent and child increased from .09 at ages 6-9 years, to .10 at 10-13 years, to .29 at 14-18 years. Reich et al (1982) found that mothers and their 12-16 year old children agreed on more symptoms which produced more similiar diagnoses than did mothers and their 6-9 year old children, except in the area of neurotic disorder which was low across all age groups.

However the statistical explanation does not account entirely for the lack of agreement between parents and children. The increases in parent-child agreement with age are small and not without contradictory evidence. For example, Achenbach et al (1987) found the mean parent-child correlation significantly higher for children aged 6-11 years than for adolescents. These data were obtained from a variety of populations using both rating and structured interview methods. In addition, there is evidence that children's responses are not highly inconsistent or unstable over time. Several studies mentioned previously, as well as this present study, have documented alpha coefficients in the 80's and 90's for child-rated instruments. Achenbach et al. (1987) reported the average retest reliability coefficient to be .74

for children from various populations. The present study found retest correlations of .60 to .71; only one of which was significantly lower than that obtained from adults. Statistical differences of this nature could not solely account for parent-child correlations of .065 to .170.

The second and perhaps more compelling argument for the lack of agreement in parent and child responses is the psychological difference in perspectives taken by the two groups. Children are rating their own behavior, while parents are rating their child's behavior. When parents and child rate behavior, they are approaching the task from different frames of reference and have access to different sources of information. These frames of reference are subject to cognitive biases and fallicies when judgments are made about people's behavior (Cantor & Kihlstrom, 1981; Fiske & Taylor, 1984; Nisbett & Ross, 1980).

For example, cognitive heuristics based on the availiability of information, it representativeness, its vividness, preconceived theories and schemas, inferences of causality and covariation all influence the judgments parents and children make regarding child behavior. Specifically, parents may have preconceived theories or schemas regarding what is stressful to children based on writings in the popular press. They might also have read that single parents and low income groups are more vulnerable to the effects of stress than are married and middle to high income groups. Perhaps this knowledge, or the actual experience of greater stress within single parents and low income groups, which is

more available to parents than to children, influenced the parent's ratings. Evidence for this can be found in the MANOVA results. On the other hand, inner feelings, sex role behavior, and grade differences are sources of information more available to children than to adults, and served to influence the children's ratings. This difference in availability and salient information may result in differences between parents and children in the construct underlying their responses to the stress and criterion measures.

Differences in the availability or vividness of information was evident in studies discussed earlier on the reporting of psychiatric symptoms. These studies found that parent-child agreement was lowest for rating of anxiety and internal symptoms and highest for outward behavior. In the present study, the number of items the child worried about was a significant predictor of anxiety in both child and parent rated models. However, there was very little agreement as to which specific events were sources of worry for the children. This again highlights the difficulties involved when inferring inner feelings of another.

Unfortunately in this study there was no self-rating of the parent which could be correlated with the child's rating of the parent. However, a study by Schwarz, Barton-Henry, and Pruzinsky (1985) provides a useful comparsion. In this study 170 mothers, fathers, college Freshmen, and siblings each completed the Child's Report of Parental Behavior. The average interrater agreement was .30 for all

raters. In general, agreement between rater pairs was significantly lower when one of the raters was a parent rating him-or herself (.25 to .34) than when parental self-ratings were not included in the correlation, i.e., when sibling ratings were correlated, (.38 to .53). The authors suggested that each family member contained a small proportion of variance due to actual child rearing behavior and a substantial portion of systematic rater bias.

Developmental theory also provides support for psychological differences which contribute to a lack of agreement between parents and children. As described early, children are different from adults biologically, socially, and intellectually. For example, the intellectual abilities of children in this study probably ranged from preoperational, to concrete operational, to formal operational thought (Piaget, 1952). The parental variance in cognitive capabilities was probably lower. This difference in cognitive processing would produce differences in interpretation of the world.

In summary, descrepancies between parent and child can provide insight into the nature of childhood stress. These differences may be a consequence of differing perspectives on behavior and statistical differences in two different populations. It is quite possible that different informants validly contribute different information and that the use of both perspectives would increase knowledge of the sources of childhood stress.

Relationship Between Ratings on the CSAS and Anxiety and Psychosomatic Symptoms

This study tested two versions of a model relating stressful events to stress reactions in children. The implicit model in the childhood stress literature included adult selection of potentially stressful events, adult appraisal of these events for children, and adult assessment of the child's stress reaction. An alternate form of the model was one which included the child's selection of events, the child's appraisal, and the child's assessment of stress reactions.

The events selected for inclusion in the regression analyses were a combination of child and adult selected events (i.e. the CSAS). These events were then rated by either parent or child, and possible stress reactions such as anxiety, psychosomatic symptoms, and behavior problems were rated by either parent or child. These analyses revealed that as long as the same informant completed both the CSAS and the anxiety or symptom measure, between 27 and 38% of the variability in stress-related symptoms could be explained. This represents a substantial improvement over the widely used Coddington scale in predicting stress reactions.

This model however proved to be incomplete. Since completion of the anxiety scale and psychosomatic checkist was followed two weeks later by the readminstration of the CSAS, additional regression analyses were performed to predict stress ratings from anxiety ratings. These analyses indicated that Grade, Sex, and ratings of anxiety, symptoms,

significantly accounted for 33% of the variability in stress ratings, 16% in frequency of event, and 25% in worry ratings in the child model. In the parent model, anxiety, behavior problems, Grade, and Sex predicted 11% of the variability in stress ratings, 8% in frequency of events, and 27% in worry ratings. Caution must be employed in interpreting these results, however, as the use of cross-lagged correlations such as ones employed in this study, have been severely criticized (Rogosa, 1980). Basically, these criticisms present statistical evidence which argues strongly against using this technique to infer causality or causal predominance from longitudinal data.

In light of the above criticisms, these data suggest a possible bidirectionality of stressful events and negative health outcomes. In this study anxiety and psychosomatic symptoms were both criteria and predictors of the severity, frequency, and worry about stressful events.

It is yet unclear whether life stress results in various mental or physical health problems, or whether these problems simply increase the likelihood of experiencing life changes or stress. It is also possible that life stress and health problems covary with an unknown third variable (Johnson, 1986). Or we may be measuring the generalized tendency to complain in two domains - physical symptoms and social irritants - both of which involve considerable subjectivity in assessment.

Several studies have documented the possible bidirectional influence of stressful events and illness.

Swearington and Cohen (1985a) administered the Child Depression Inventory and State-Trait Anxiety Inventory for Children twice, five to six months apart to a group of junior high school students. Negative life events were a significant predictor of anxiety and depression at time one and time two. However, anxiety and depression at time 1 were also significant predictors of life events at time 2.

Compas, Wagner, Slavin, & Vannatta (1986) found a similar pattern of results with students making the transition from high school to college. Negative events three months prior to college entrance significantly predicted anxiety one week after college started. However, symptoms three months prior to college were also predictive of negative events one week after college began. Neither of these relationships were significant three months later. Compas and Wagner (1985) found that daily hassles and symptoms were reciprocally related across time. Major life changes were not found to predict later symptoms, although initial level of adjustment was found to be predictive of later life events.

The use of anxiety as a predictor of life events at first appears puzzling. However, Gersten et al (1977) implicated a third variable that would encompas both psychological distress and the occurence of life events. They cited as possiblities sociocultural factors or longstanding difficulties in the family context. Both these situations would be ongoing stressful processes that contribute to maladjustment and negative life events.

To summarize, data from this study suggested that stress and symptoms be viewed as an interactive process, probably mediated by a third variable which would serve to either exacerbate or ameliorate the effects of stress. The model linking stressful events and their appraisal to anxiety and symptoms needs to be expanded to include the effect of anxiety and symptoms on stressful events.

Limitations

The results from this study should be viewed in the context of its methodological limitations. Perhaps the most severe limitation is one of generalizability of the findings. The CSAS was developed with a small sample of white middle to upper-middle class children living in a small community in the Northeast. The larger study involved testing 44% of the total population of children and parents in grades 1-4 in that same community. Thus, these results should be generalized only to populations that are similiar to this sample. It is quite possible that the sources of stress and the ratings of these events are specific to the sample of children employed in this study. Children from different school districts, social classes, ethnic groups, and geographic locations may have suggested different sources of stress which would have resulted in a different set of items for the CSAS. Thus, the CSAS may not be comprehensive enough to be valid for various groups of children.

A second limitation is the heavy reliance on self-report data both by children and parents. No objective criteria have been used to provide a test of the accuracy of either

set of data. In fact, different groups of children might be diagnosed as "stressed" depending on whether the parent or child completes the CSAS. Observational data should be collected which could supplement self-report information. Ratings by teachers may also add more objectivity.

Third, there was no control over the parent's completion of any of the questionnaires. The experimenter was not immediately available for any questions that may have arisen or to provide further clarification of the questions. This was not the case when the children were tested. Many of the items were explained and children were encouraged to ask questions. Given this difference in experimenter envolvement in the two samples, there was the chance for experimenter bias to influence the results from the children. Parents were asked not to consult with their children as the parents answered the questionnaires. But since the parents completed these forms at home, their compliance with this request could not be checked. Thus the data collection in the parent sample could not be well controlled.

Fourth, several changes should have been made in the CSAS. Use of a one-year time frame may have been too demanding for younger children. There was no lie scale incorporated into the questionnaire. Events which objectively should not have produced stress could have been added. Also, in addition to life events and hassles, chronic strains could have added. The adult literature suggests that this is an important source of stress as well (Perlin & Lieberman, 1979).

Thus, given the limitations cited above, caution should be used in interpreting the results and especially in generalizing the finding to the population at large.

Future Directions

This dissertation has provided preliminary information concerning sources of stress in middle childhood. First, much more work psychometic work remains to be done on the CSAS. It should be administered to a much broader sample of children. Different school district, different ethnic groups, different socioeconomic groups should be tested. These results should be used to refine the scale and then to establish norms on a representative sample. With the use of more subjects, factor analytic techniques could be employed to investigate the underlying dimensions of childhood stress.

Second, longitudinal studies of stress in middle childhood would provide more detailed information on the development of stress reactions and symptoms. Given that the present study was cross-sectional, developmental trends could not be established. It would be instructive to know how the individual child's perception of different stressors changes over time.

Third, some effort should be made to understand more fully the nature of parent and child differences in stress and anxiety ratings. Specifically, what is the differential contribution of both parents and children in understanding chidhood stress? Can the discrepancies themselves serve to reveal sources of stress in the parent-child relationship? This question has direct application to diagnosis and

treatment of stress-related disorders.

Fourth, other measures such as temperament, social support, problem solving skills, and locus of control may serve to better understand individual differences in reaction to stress.

Fifth, more detailed analysis of the stress process needs to be investigated. According to Rutter (1981), "If the concept of stress is to take us beyond the banal conclusion that bad experiences may have bad effects, we need to undertake more searching analysis of which features of life events make them liable to predispose to which types of disorder by which process or mechanism." (p.327). The reciprocal effects of stress and illness need to be investigated in more detail within this framework as well.

Summary and Conclusions

In conclusion, this dissertation addressed a number of issues central to childhood stress. Given the preliminary nature of this data, a number of tentative conclusions may be drawn. First, when provided with an appropriate response format, children in grades 1 through 4 can be consistent and reliable informants regarding the sources of stress in their lives. Second, child-reported sources of stress are not consistent with current life event approaches. Children revealed events which could be classifed as hassles, role strains, threats to self-esteem, or threats to basic needs as sources of stress. According to children, sex, number of events worried about, and number of stressful events experienced are significant predictors of anxiety and

psychosomatic symptoms. Third, differences exist between parents and children in the perception of childhood stress and anxiety. Individual pairs of parents and children do not agree regarding the stressfulness of events, their frequency, presence of worry about events, or the child's level of anxiety. Parents reported the experience of a greater number of stressful events than did children. Fourth, anxiety and symptoms may function as both criteria and predictors of stressful events during the middle childhood years.

Based on these findings, any discussion of the sources of childhood stress would be invalid without the inclusion of the child's perspective. Information regarding childhood stress no longer needs to rely on adult assumptions and biases.

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APPENDICES

APPENDIX A

PARENT LETTER AND CONSENT FORM FOR PILOT STUDY

UNIVERSITY OF NEW HAMPSHIRE

Department of Psychology
Conant Hall
Durham, New Hampshire 03824-3567

April 4, 1986

Dear PARENTS,

I would like to inform you about a study of children's worries and concerns which will be conducted at the York Elementary School. This letter will describe the study, including what your child would be asked to do. Please read this letter and the attached sheet. If you agree to let your child participate, please sign below in the space provided.

The project focuses on the child's view of worries and concerns in his/her life. There are quite a few books available today on the pressures being placed on children, and how they are being "hurried" through childhood. In these books, professionals working in a clinical setting, evaluate the life-styles of their young patients and assume that all children today must feel tense. However, most children have rarely been asked if they experience tension and if so, what they consider to be troublesome events. The purpose of this project is to talk with small groups of children in grades 1 through 4 and to find out what, if anything, bothers someone their age and causes them to feel tense. I will then develop a questionnaire which will include various events that children themselves may have considered troublesome and ways they cope with any tension that might result.

I will begin by conducting 30-minute small group discussions in late April and early May. These discussions will take place during free periods in the school day, so that your child will not miss any class time. Tape recordings of the group discussions will be reviewed and then the tapes will be destroyed. The information gathered in these sessions will be used to create a questionnaire on children's worries and concerns. This questionnaire will then be reviewed by Mr. Vogel before it is given to the students.

In late May, this questionnaire, as well as one on self-esteem, and one about thinking processes will be given to the students. The self-esteem questionnaire will ask the child how he/she feels in various situations. The measure of thinking processes is not an intelligence test or an achievement test, but indicates how children at different ages understand events in their environment. All questionnaires will be read to the students and they will respond using picture answer sheets, so that reading ability will not be required. Results from these

questionnaires will only be seen by myself. They will not become part of your child's permanent academic record and will not enter into any academic or guidance decisions made concerning your child.

In order to protect the confidentiality of your child's responses, I will not have any knowledge of your child's identity. A secretary at the Elementary School will handle the mailing of this letter and will receive the signed consent forms. She will assign each student a number and then arrange for them to meet with me in small groups. The only information I will receive will be the student's number. The secretary, in turn, will not have any knowledge of their responses. All data analyses will be performed on groups of students only. No attempt will be made to analyze the responses given by any one child. The aim of the project is to establish typical responses given in the different grades, not to evaluate individual students.

I would be happy to answer any questions you might have about this study at a meeting on April 14th at 7:30 PM in the Elementary School Activity Room. In addition, you may contact me at any time through the Elementary School ( ) or at the University of New Hampshire (603-862-2360). This project is the first part of a larger study to be conducted with the entire Elementary School next Fall. Thus, your participation is greatly appreciated. Should you agree to participate in this first step, either you or your child may withdraw from the study at any time. In addition, before each part of the study, I will also ask your child whether he/she would like to participate and will not push for cooperation if your child seems unwilling.

Although I cannot provide you with information about any of your child's responses, I will see that the school sends all participants a copy of the finished project, sometime in Spring 1987. At that time, if you wish, I would be happy to meet with groups of parents to discuss the findings. The information gathered in this study will be beneficial in planning future guidance programs for students at the York Elementary School. Also, depending on the results, the study will contribute to the development of a scale which would measure a child's level of tension, and detect children who are in need of assistance.

Thank you for your time and your consideration of this study.

Sincerely,

Maryann Corsello, Ph.D. cand.

UNDERSTANDING

1. I understand that my child will participate in a group discussion about worries and concerns that children his/her age experience. I understand that these discussions will be tape-recorded, transcribed, and then erased.

2. I understand that my child will complete a questionnaire on worries and concerns, self-competence, and thinking processes during two 30 minute free periods. My child's responses will be seen only by the investigator, and will not become part of my child's academic record or be used in any placement or guidance decisions.

3. I understand that I can ask and have answered any questions I have about the study now, or in the future by calling Maryann Corsello at or Dr. Carolyn Mebert at 603-862-2360.

4. I understand that I may not have access to my child's responses.

5. I understand that if my child is unwilling to participate in the study after being asked by the investigator, M. Corsello, no coercion will be used to promote his/her participation.

6. I understand that I and/or my child can withdraw consent to participate at any time.

7. I understand that the investigator will have no knowledge of my child's identity, and that the secretary handing the administrative tasks will have no knowledge of my child's responses. Anonymity and confidentiality of information provided in the course of this study will be ensured by assigning code numbers to all participants and analyzing only group data.

8. I understand that I will receive a report of this study upon its completion.

___ I do agree to have my child, _____, participate.
(Name)

___ I do not agree to have my child, _____, participate.
(Name)

_____ _____

Signature of parent Date

APPENDIX B

PROCEDURAL NOTES

I. Explanation of the Concept of Stress and Response Scale

The concept of stress and use of the response scale was explained to the children in the following way:

> "Have you ever felt nervous or uptight about something? What does your body do to tell you that you feel nervous? (Wait for students to give examples of psychosomatic symptoms associated with stress.) That's right, you might get a stomach ache, or a headache, or you might feel your heart beating very fast. These are all ways that your body lets you know you are feeling nervous about something. Does everyone understanding what I am talking about?
>
> Now, I would like you to look at these drawings (show pictorial response scale). These are pictures of children who get more and more nervous about something. Which one is the most calm and not nervous at all? (Wait for children to point to first stressed figure). Which one is a little nervous? (Wait for children to point to second or third picture). And which one is the most nervous? (Wait for children to point to the sixth stress figure). See how the pictures go from being very calm to more and more nervous?
>
> I will read to you a list of questions that some children your age have said made them feel nervous. Some of these questions might make you feel nervous and some might not. What I would like you to do is circle the picture of the child that best matches how you feel about each question. If you are not nervous circle this one (number 1); if you get a little nervous circle one of these (numbers 2-4); and if you get very nervous and your body lets you know you are nervous circle one of these (numbers 5 and 6). This is not a test and there is no right or wrong answers. The best answer is how you feel and nobody knows that better than you. Whatever you circle will be the right answer for you."

II. Scale Administration

For the administration of the CSAS, groups of 10-12 children were seated at a table in cubicles with 12 inch high dividers on three sides. These cubicles were designed to create privacy for the children and to eliminate contamination of responses. Some students called these their "offices" and all appeared to enjoy using them. Children were not tested in their classrooms, but in a multi-purpose room. The experimenter read the questions aloud in the following way,

> "Number ..... How would you feel if.....? Circle the person that matches how you feel."

Each question was read twice. Each new page number was also announced to help children keep their places. A 5 minute break was taken after the 67 questions were completed. This first part of the questionnaire took between 20-30 minutes, depending on the age of the group. This was the end of the session for the first grade children.

After the break, the experimenter explained the rating of the Frequency and Worry subscales in the following way:

> "Now I am going to read to you the same set of events but ask you a different question about them. This time I want you to think whether the event ever happened to you or not in the past year. Let's think about how long a year is and what might have happened in the last year. Last year you were in the..... grade. You celebrated Halloween, Thanksgiving, Christmas, your birthday, Easter or Passover, and summer vacation. You also went through each of the four seasons, fall, winter, spring, and summer last year. Think to yourself what you did last year. You have a whole 12 months to think about! Try to remember everything that happened last year.
>
> I will read each of the questions you have already heard. If the event happened to you a lot, circle this big graph that says "alot." If it happened to you once or twice, circle this medium size graph that says "once or twice." If it never happened to you, circle this real small graph that says "never."
>
> Now, do you see these big words YES and NO? Point to the one that says YES. Point to the one that says NO. After you circle either alot, once/twice, or never, I will ask you, "Do you worry about .....(repeat substance of question)?" It doesn't matter if the event happened to you or not. You can worry that it did happen already, or might happen in the future. Feeling worried is the same feeling we talked about earlier when you circled the figures. Feeling worried

means you get nervous or uptight about something, its always on your mind and bothering you, and you might even get a headache, stomach ache, or bad dream because of it. If you do worry about the event all the time or a lot of the time circle YES. If you don't worry at all, or hardly ever, circle NO. Again, your answer is the right answer. Only you knowq how you really feel."

The Frequency and Worry subscales were administered in the same way as the Stress rating subscale. An assistant was present and had the same tasks described above. The experimenter asked the questions in the following way:

"Number ..... How often in the last year did you...(question)....Was it never, once or twice, or a lot? Now, do you worry about .....(question) .....happening? Circle yes or no.

This section took 25-30 minutes, depending on the age of the group. After this section, the children were sent back to their classroom.

III. Additional Components of Scale Administration

A. Role of the Assistant

An assistant helped the experimenter during the scale administration. She watched to see if students had any questions, were on the right page, were answering the question being read, and were not talking to their neighbor. She also watched to see if students were marking the same answers over and over, or were making patterns with their answers. If either she or the experimenter detected this in a child, she would talk to the child and get him or her to stop and think about the answers and perhaps to change previous answers which were not accurate.

Employing an assistant was a critical feature of the scale adminstration. Most of the first grade children needed extra attention in completing the questionnaire, as did some of the second graders. Her role in grades 3 and 4 was mainly one of answering occasional questions and maintaining order in some of the larger groups. This type of experiment could not have been run successfully without an assistant.

B. Intangibles

Perhaps one of the most difficult aspects of the testing procedure to document is the rapport that was established among the experimenter, assistant, and children. However, I feel this was a critical feature in the study. At first, the children were somewhat suspicious of the experiment.

My first job was to establish that I was on their side, not someone who was testing them to see how smart or good they were. I also emphasized how no one had asked children of this age how they feel about these questions. This was their chance to let adults know how they felt.

Secondly I needed to assure the children that no one but myself would see their answers. They were very concerned that teachers or parents would find out their responses and that the children would get in trouble. I explained why they put their numbers and not names on all papers they did for me, and that even I would not know who said what.

Finally, I watched that no one got embarrassed or looked upset because of any of the questions. Since Coddington had warned that asking children about stressful events might cause stress in the children, I was especially vigilent. However, I could not detect any evidence that the task was upsetting. The children appeared to enjoy going to "Stress class" (!) and many felt sad when the sessions were over. My overall impression was that it was a positive experience for the children.

APPENDIX C

MEANS AND STANDARD DEVIATIONS OF ITEMS IN THE CSAS - PILOT STUDY

		Stress Rating		Frequency Rating	
		M	SD	M	SD
1.	Thinking about ghosts and scary things	2.081	1.474	2.590	1.637
2.	Watching a scary TV show or movie	1.823	1.181	3.902	1.955
3.	You get seriously hurt or have to stay in hospital	3.839	1.812	2.435	1.467
4.	Your pet dies	4.129	1.769	2.387	1.464
5.	Listen to news events	2.279	1.529	2.516	1.597
6.	Being kidnapped	4.371	2.066	2.229	1.488
7.	Trying a new activity	2.032	1.187	2.242	1.434
8.	Being bored	1.839	1.308	2.984	1.604
9.	Getting lost	2.803	1.611	1.919	1.271
10.	Parent/teacher thinks	2.741	1.514	2.129	1.542
11.	Hearing noises in dark	2.032	1.629	2.919	2.035
12.	Not happy with way you look	2.129	1.594	1.951	1.407
13.	A parent dies	5.226	1.407	1.033	0.181
14.	Grandparent/relative is seriously ill or dies	4.645	1.631	2.323	1.364
15.	Parents fighting	2.689	1.597	2.419	1.532
16.	Brother/sister gets seriously ill or hospitalized	3.246	1.886	1.885	1.279
17.	Parents get divorced	4.161	1.757	1.150	0.360
18.	Too many things to do	2.177	1.574	2.435	1.646
19.	Brother/sister bugging you	2.774	1.903	4.161	2.042
20.	Not having mother or father around when you want them	2.839	1.539	2.129	1.397
21.	Having to babysit for for younger brother or sister	2.067	1.686	1.952	1.693
22.	Parent does not let you do things	3.129	1.797	2.855	1.716
23.	Having a new baby brother or sister in family	2.098	1.904	1.548	0.783
24.	Parent loses a job	2.710	1.768	1.300	0.809
25.	Being home alone with out a parent around	1.629	1.428	2.516	1.753

	Stress Rating		Frequency Rating	
	M	SD	M	SD
26. Kids bug/pick on you	2.721	1.733	2.177	1.420
27. Good friend gets seriously hurt or injured in an accident	3.694	1.714	1.774	1.336
28. When kids cheat in games or in school	2.590	1.687	3.258	1.890
29. Kids want you to steal things from stores	3.656	1.905	1.371	1.105
30. Having no friends	3.607	1.882	1.677	1.265
31. Fights with friends	2.383	1.427	2.887	1.812
32. Playing on sports team and people are depending on you	2.387	1.653	1.613	1.233
33. Not having as many toys/ clothes as friends have	2.033	1.316	1.475	1.163
34. Parent yelling at you	2.839	1.785	2.677	1.657
35. Teacher yelling at you	3.475	2.022	2.362	1.714
36. Teacher does not believe you	2.677	1.523	1.770	1.244
37. Making a mistake in front of other kids	2.694	1.585	1.581	0.691
38. Being late for school	2.016	1.477	1.806	1.143
39. Not understanding something when rest of class does	2.823	1.615	1.839	0.995
40. Kids correct you when you give an answer in class	2.516	1.597	1.869	1.323
41. Forget to do some work you are supposed to do	2.484	1.501	1.629	1.090
42. Getting many answers wrong on a paper	3.145	1.940	1.758	0.881
43. Parents expecting you to always get good grades	1.983	1.799	2.557	1.893
44. Sent to the principal's office	3.919	2.043	1.403	0.839
45. Teacher won't let you go to the bathroom	3.935	1.999	2.000	1.482
46. Taking tests	2.210	1.812	1.774	1.286
47. First day of school	2.710	1.995	1.803	1.066
48. Going to a new school	2.871	1.886	1.532	0.804
49. Riding on the school bus	2.148	1.749	4.387	1.814
50. Performing in front of others; give report,etc.	2.328	1.630	2.097	1.277

APPENDIX D

SUMMARY TABLE OF MULITVARIATE ANALYSIS OF VARIANCE TESTING DIFFERENCES ON THE RCMAS AND CSAS WITH GRADE AND SEX AS GROUPING VARIABLES -- PILOT DATA

IV	DV	Univariate F	df	p
Grade	RCMAS	0.881	3/46	0.458
	Stress	0.405	3/46	0.750
	Frequency	1.409	3/46	0.252
Sex	RCMAS	6.530	1/46	0.014
	Stress	3.816	1/46	0.057
	Frequency	0.194	1/46	0.662
Grade X Sex				
	RCMAS	0.259	3/46	0.854
	Stress	0.437	3/46	0.727
	Frequency	0.265	3/46	0.851

APPENDIX E

FULL MODEL REGRESSION ANALYSIS PREDICTING RCMAS FROM THE CSAS, GRADE, AND SEX. - PILOT DATA

Variable	Coeff.	Std. Error	Std. Coeff.	T	P(2 Tail)
Constant	-4.681	5.321		-0.880	0.383
Grade	-0.095	0.824	-0.015	-0.115	0.909
Sex	3.427	1.737	0.258	1.973	0.054
Stress	3.113	1.225	0.334	2.541	0.014
Frequency	0.039	0.110	0.047	0.358	0.722

Mult.R=.471 Squared Mult.R=.222 Adj. Sq. Mult.R=.158
F(4,49) = 3.493, p <.014

APPENDIX F

PARENT LETTER AND CONSENT FORM

UNIVERSITY OF NEW HAMPSHIRE

Department of Psychology
Conant Hall
Durham, New Hampshire 03824-3567

September 19, 1986

Dear PARENTS,

Beginning in October, a study of children's worries and concerns will be conducted at the York Elementary School. This letter will describe the study, as well as a preliminary one completed at YES last spring. Attached to this letter is a consent form on which you may indicate your intentions about participating in the Fall study. Regardless of your decision, please send this form back to school with your child by October 3rd.

Last spring a study on the child's view of his/her worries and concerns was conducted at YES. The purpose was to find out what kinds of events children consider troublesome or stressful. Sixty-two children from grades one through four participated in this initial phase. During this study, I met with small groups of children to ask them what kinds of things made them tense and what they did to feel better. They also drew a picture of what a nervous or stressed child would look like. I then took their suggestions and developed a questionnaire that reflected both their concerns and some of the concerns of child development specialists. The children's drawings were used to develop a series of pictures which the child used to indicate how he/she felt about an event.

Children who participated in this phase of the project really appeared to enjoy themselves. Every effort was made to make this a positive experience for the children. If they did not feel like answering any of the questions they did not have to. However, I think they also felt relieved to find that other children were bothered by some of the same things they were. I studied the results for the entire group of children, for boys and girls separately, and finally for each grade level. Some very interesting findings emerged which I will share with both parents and teachers when the entire project is completed.

This next phase will be a continuation of the study conducted last spring. This time I will also be interested in parent perceptions of stressful events, as well as the children's perceptions. All families in grades one thru four will be asked to participate. The time required for this project will be three hours for the children, and about one and one half hours of your time. During the first hour, groups of 10-15 children will be given the stress questionnaire to complete individually. For the second hour, the children will complete an anxiety scale for

children, a symptom checklist, and a coping scale developed from the answers children had given to me last spring. During this time, you will be sent the same stress questionnaire, to complete as you believe your child would, a currently used child stress questionnaire, a child behavior checklist, and a page on demographic information. About a month later, both parents and children will complete the stress questionnaire again to determine the stability of the answers over time. All questionnaires will be read to the students, so that reading ability will not be a factor. All sessions will be scheduled so that your child does not miss any academic material presented in class.

Several safeguards have been built into this study to protect the confidentiality of the answers given by you and your child. Last spring a system was devised whereby a secretary at the elementary school handled the mailing of the letters to parents and assigned a number to each child who participated. During the entire study, children used their numbers and were requested to never put their names on anything they completed for me. At no time did I have access to their names and the secretary did not have access to the children's responses. This system worked perfectly last spring and will be used again for the fall study.

Also, since names will not be used, there is no chance that the information collected could become a part of your child's permanent academic record or enter into any academic or guidance decisons made concerning your child. No one at the elementary school will have access to the information. All data analyses will be performed on groups of students only. No attempt will be made to analyze the responses given by any one child. As in the preliminary study, the goal is to establish typical responses given in the different grades, and for boys and girls, not to evaluate individual students.

Finally, you and your child are not obliged to answer any questions you do not wish to and are free to withdraw from the study at any time with no questions asked. This study is meant to be a positive experience for both parents and children, and if it should prove otherwise, you have no obligation to continue. Although I cannot provide you with information about any of your child's responses, I will see that the school sends all participants a summary of the finished project, sometime in Spring 1987. At that time, I would welcome the opportunity to meet with groups of parents to discuss the findings. Based on the preliminary study, I anticipate that this information will be beneficial to parents, as well as to teachers and guidance counselors in planning future programs for the students. The results from this study will also be used to improve the quality of current stress assessment techniques to make them more sensitive in detecting children who are in real need of assistance.

I would be very happy to discuss the project further and to answer any questions you might have at a meeting on September 29th at 7:30 PM in the York High School auditorium. In addition, you may contact me at any time through the Elementary School ( ) or at the University of New Hampshire (603-862-2360).

Thank you for your time. I appreciate your consideration of this project, and hope you and your child will choose to participate.

Sincerely,

Maryann Corsello, Ph.D. cand.

UNDERSTANDING

1. I understand that my child will complete a questionnaire on worries and concerns, an anxiety scale, and a symptom checklist during three 60-minute free periods. My child's responses will be seen only by the investigator, and will not become part of my child's academic record or be used in any placement or guidance decisions.

2. I understand that I will complete the same questionnaire on worries and concerns, a currently used childhood stress questionnaire, a child behavior checklist, and some demographic information. My responses will be seen only by the investigator and will not become part of my child's academic record or be used in any placement or guidance decisions.

3. I understand that I can ask and have answered any questions I have about the study now, or in the future by calling Maryann Corsello at or Dr. Carolyn Mebert at

4. I understand that I may not have access to my child's responses.

5. I understand that if my child is unwilling to participate in the study after being asked by the investigator, M. Corsello, no coercion will be used to promote his/her participation.

6. I understand that I and/or my child can withdraw consent to participate at any time.

7. I understand that the investigator will have no knowledge of my identity or that of my child, and that the secretary handing the administrative tasks will have no knowledge of our responses. Anonymity and confidentiality of information provided in the course of this study will be ensured by assigning code numbers to all participants and by analyzing only group data.

8. I understand that I will receive a report of this study upon its completion.

(Please detach form and return to your child's teacher by October 3rd)

_____ I, _____ (Parent's name), DO AGREE to participate,

and to have my child, _____ (Child's name), participate.

_____ I, _____ (Parent's name), DO NOT AGREE to participate,

nor have my child, _____ (Child's name), participate.

Date _____

APPENDIX G

THE CHILDREN'S STRESS ASSESSMENT SCALE (CSAS)

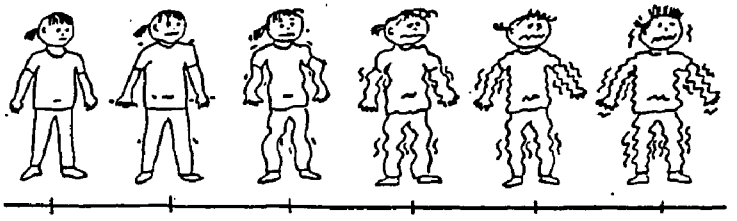
NUMBER _____ GRADE _____ AGE _____

TODAY I WOULD LIKE TO ASK YOU ABOUT SOME THINGS THAT MIGHT OR MIGHT NOT BOTHER KIDS YOUR AGE. I WILL READ EACH OF THE QUESTIONS TO YOU AND I'D LIKE YOU TO CIRCLE THE BOY OR GIRL THAT BEST MATCHES HOW YOU FEEL ABOUT EACH QUESTION.

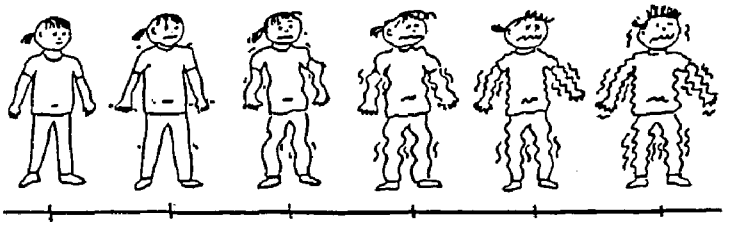
DON'T WORRY ABOUT GETTING THE RIGHT ANSWER BECAUSE THERE IS NO RIGHT ANSWER, IT ALL DEPENDS ON HOW YOU FEEL ABOUT THINGS. FOR THESE QUESTIONS SOMETIMES IT'S BEST TO CIRCLE THE ANSWER THAT FIRST POPS INTO YOUR HEAD, AND NOT TO THINK TOO LONG OR TOO HARD ABOUT ANY ONE QUESTION. ALSO, YOU DON'T HAVE ANSWER ANYTHING YOU DON'T WANT TO.

REMEMBER TO CIRCLE HOW YOU REALLY FEEL AND NOT HOW YOUR NEIGHBOR FEELS ABOUT EACH QUESTION. IT'S ALSO IMPORTANT NOT TO GO AHEAD OF THE GROUP BECAUSE SOMETIMES I EXPLAIN THE QUESTIONS A LITTLE MORE AND YOU WILL MISS THAT. I HAVE THREE PRACTICE QUESTIONS FOR YOU TO TRY SO YOU CAN SEE WHAT WE WILL BE DOING.

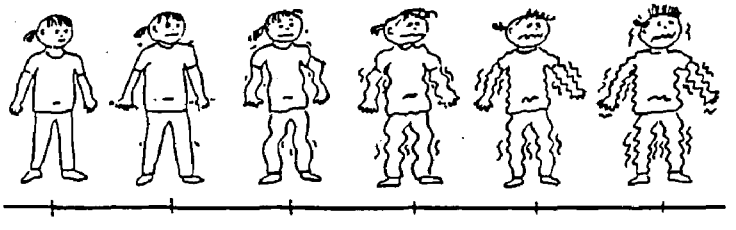
A. YOU LOSE A TOY THAT IS NOT ONE OF YOUR FAVORITES



B. YOUR TEACHER CALLS ON YOU IN CLASS AND YOU DON'T KNOW THE ANSWER

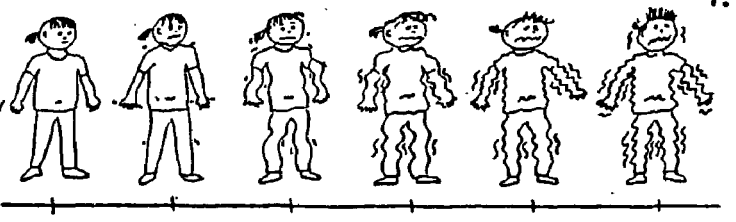


C. YOU PARACHUTE OUT OF AN AIRPLANE FOR THE FIRST TIME

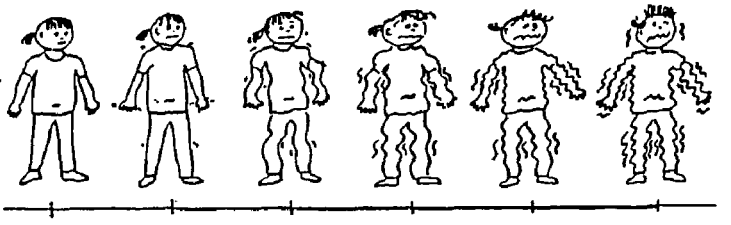


1.

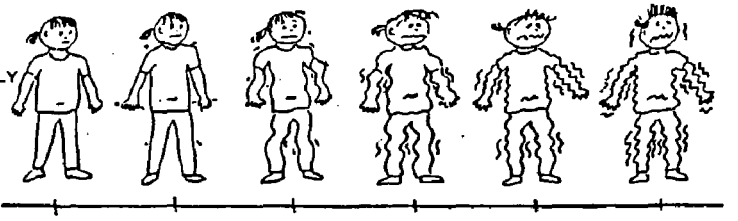
1. THINKING ABOUT GHOSTS AND SCARY THINGS



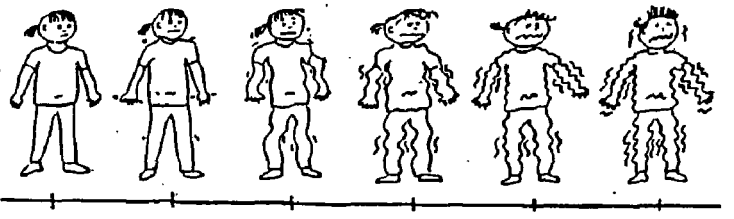
2. WATCHING A SCARY TV SHOW



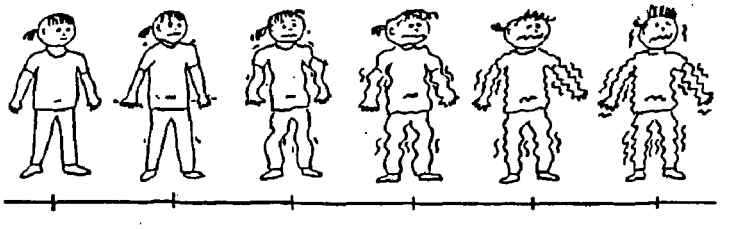
3. YOU GOT SERIOUSLY HURT OR HAD TO STAY IN THE HOSPITAL



4. MEETING NEW KIDS

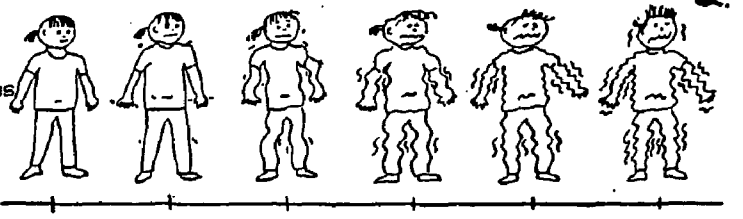


5. YOUR PET DIES

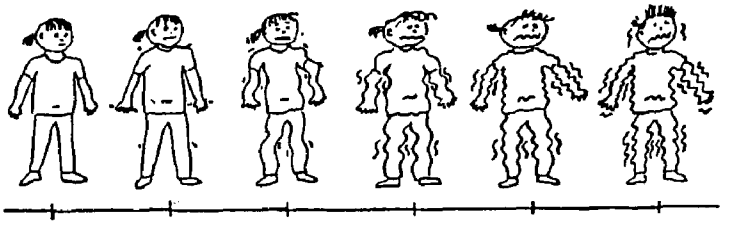


2.

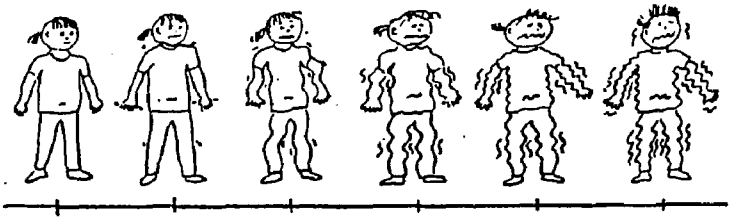
6. LISTENING TO NEWS EVENTS ABOUT BAD THINGS THAT HAPPEN IN THE WORLD



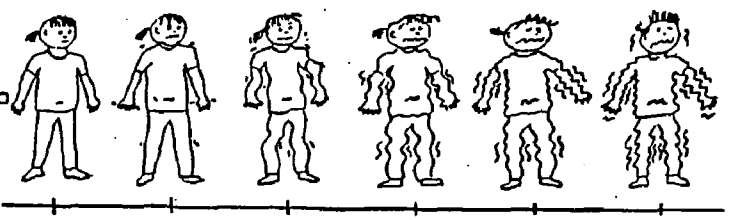
7. BEING KIDNAPPED



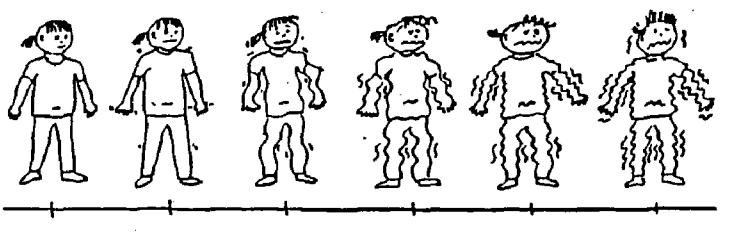
8. TRYING A NEW ACTIVITY THAT FELLS A LITTLE DANGEROUS



9. BEING BORED OR HAVING NOTHING TO DO

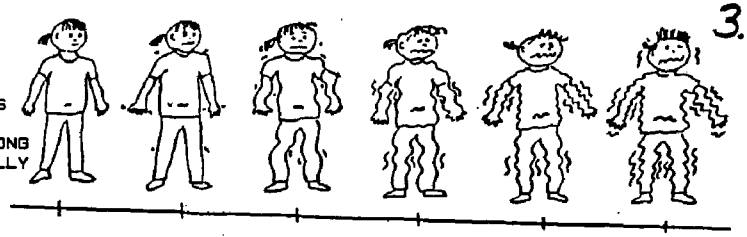


10. GETTING LOST

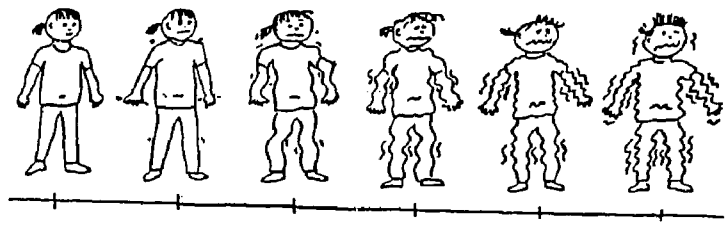


3.

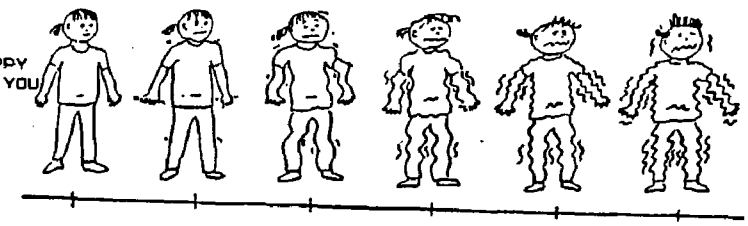
11. PARENT OR TEACHER THINKS YOU DID SOMETHING WRONG WHEN YOU REALLY DIDN'T



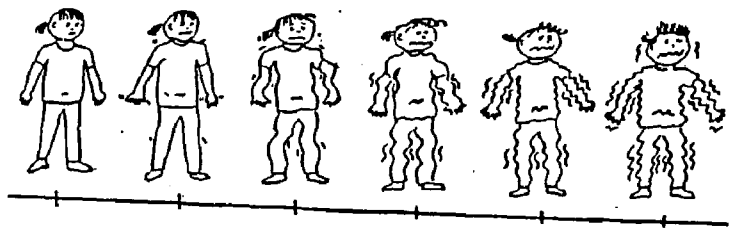
12. HEARING NOISES IN THE DARK



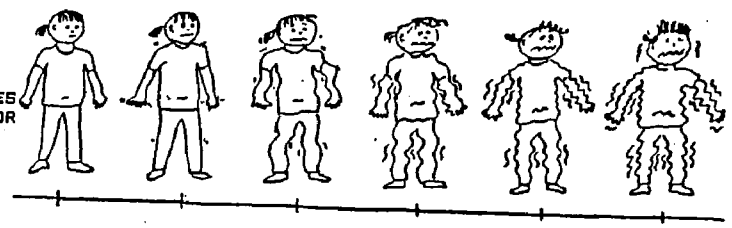
13. NOT BEING HAPPY WITH THE WAY YOU LOOK



14. A PARENT DIES

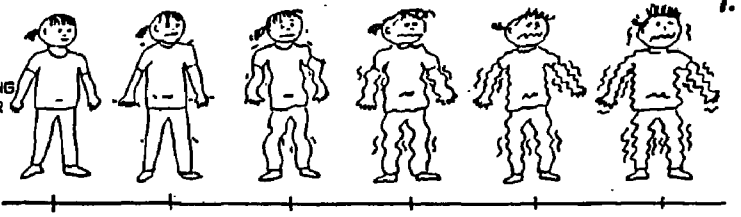


15. GRANDPARENT OR OTHER CLOSE RELATIVE BECOMES SERIOUSLY ILL OR DIES

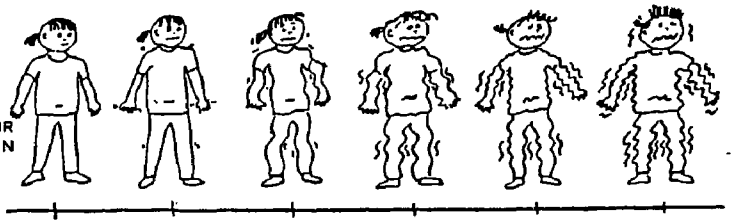


4.

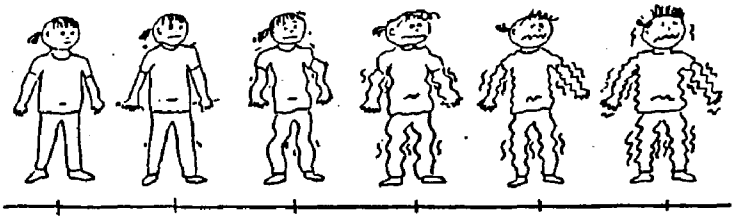
16. PARENTS FIGHTING WITH EACH OTHER



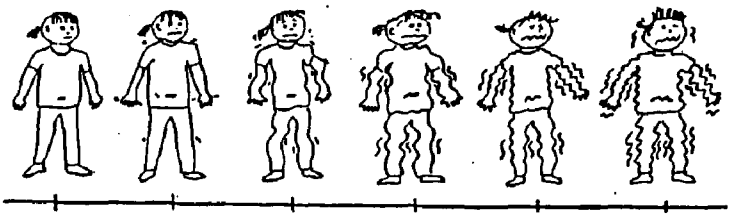
17. BROTHER OR SISTER BECOMES SERIOUSLY ILL OR HAS TO STAY IN THE HOSPITAL



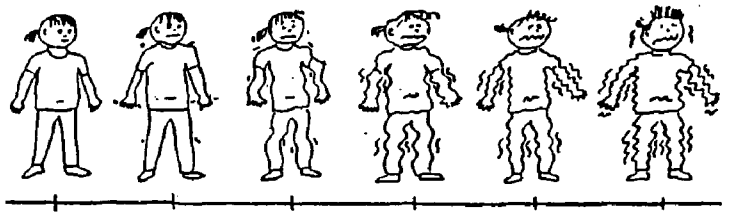
18. PARENTS GET DIVORCED



19. HAVING TOO MANY THINGS TO DO

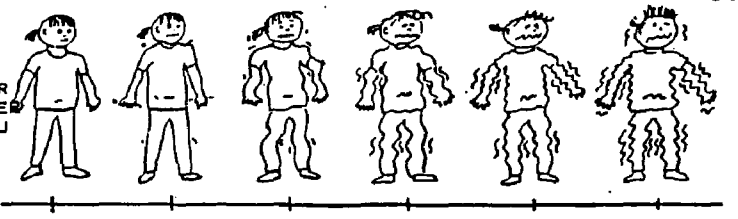


20. BROTHER OR SISTER BUGGING YOU

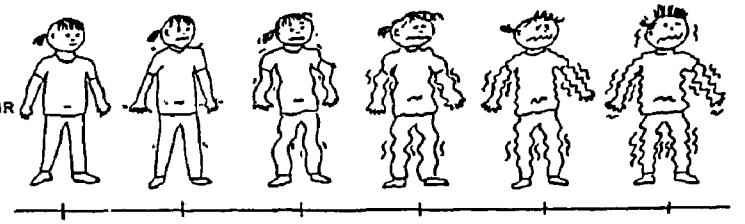


5.

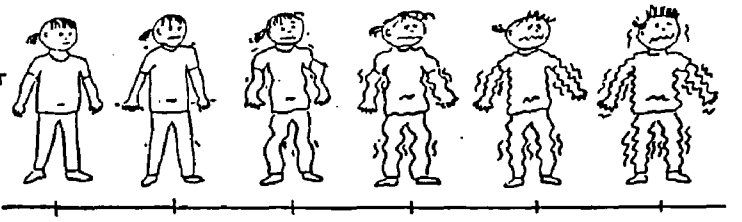
21. NOT HAVING YOUR MOTHER OR FATHER AROUND WHEN YOU WANT THEM



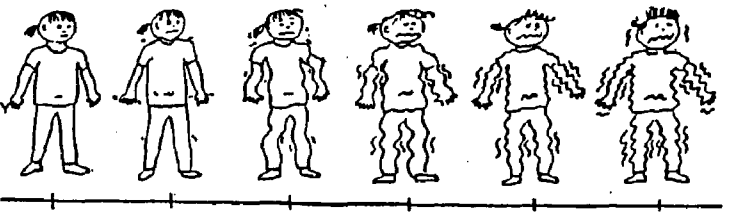
22. BEING RESPONSIBLE FOR YOUR YOUNGER BROTHER OR SISTER WHEN A PARENT IS NOT HOME



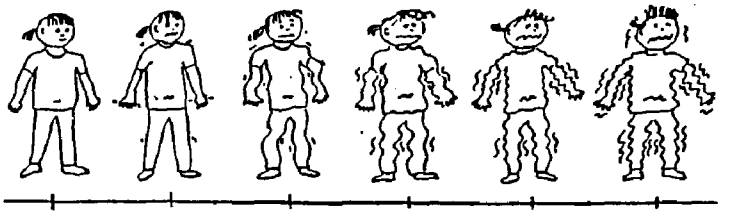
23. PARENT DOES NOT LET YOU DO THINGS



24. HAVING A NEW BABY BROTHER OR SISTER IN FAMILY

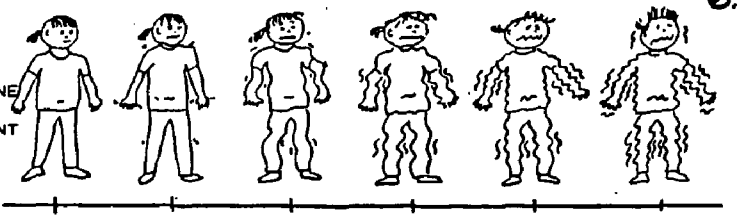


25. PARENT LOSES A JOB

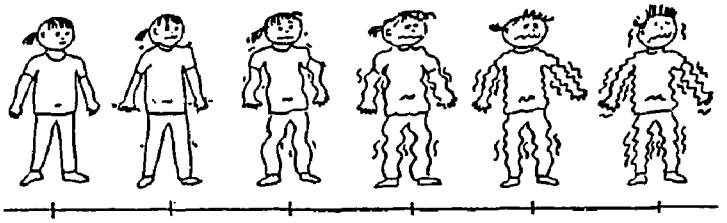


6.

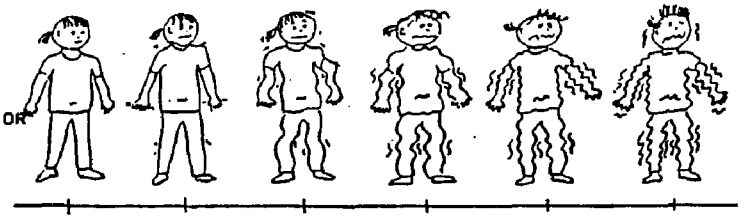
26. BEING HOME ALONE AFTER SCHOOL WITHOUT A PARENT AROUND



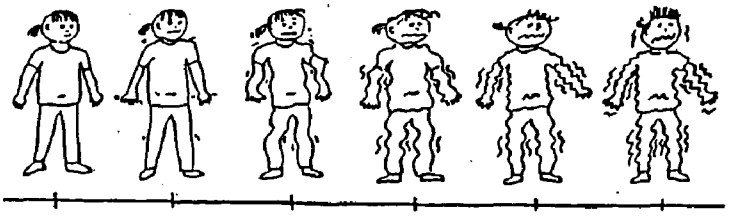
27. KIDS BUGGING OR PICKING ON YOU



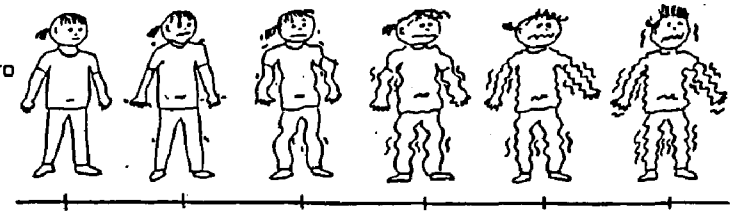
28. A GOOD FRIEND BECOMES SERIOUSLY ILL OR DIES



29. WHEN KIDS CHEAT IN GAMES OR IN SCHOOL

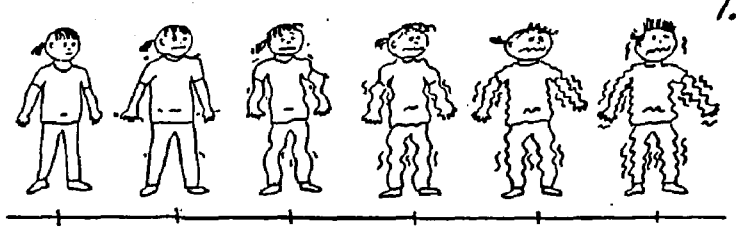


30. KIDS WANT YOU TO STEAL THINGS FROM STORES

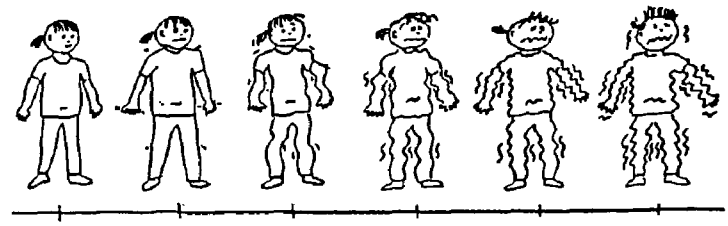


7.

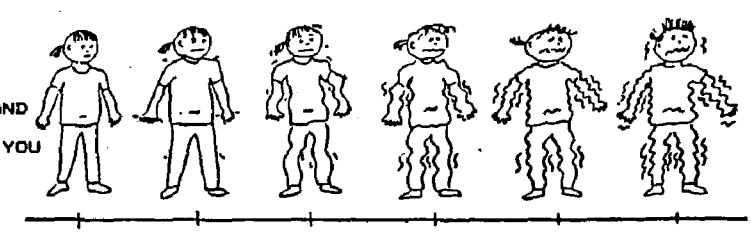
31. HAVING NO FRIENDS



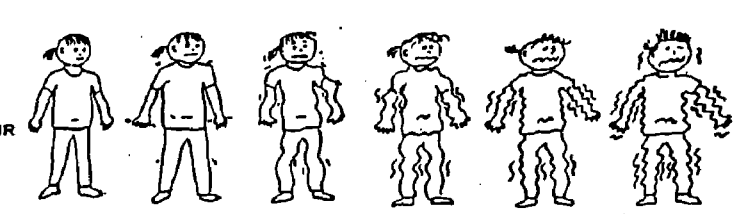
32. FIGHTS WITH FRIENDS



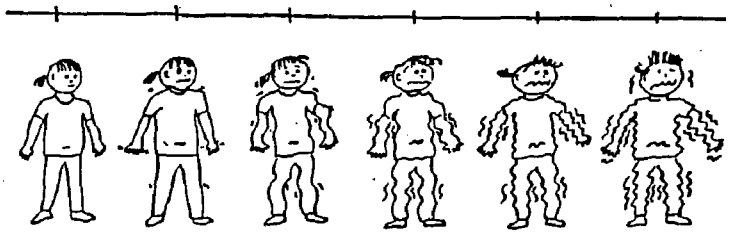
33. PLAYING ON A SPORTS TEAM AND PEOPLE ARE DEPENDING ON YOU TO DO WELL



34. NOT HAVING AS MANY TOYS OR CLOTHES AS YOUR FRIENDS HAVE

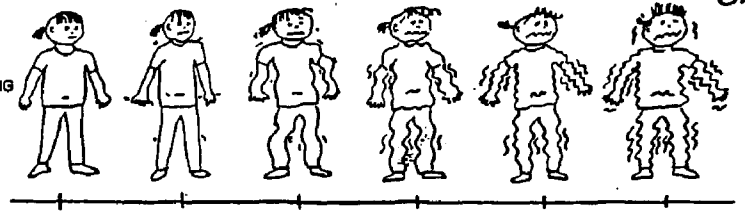


35. PARENT YELLING AT YOU

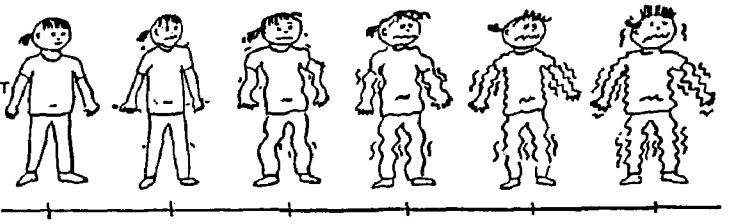


8.

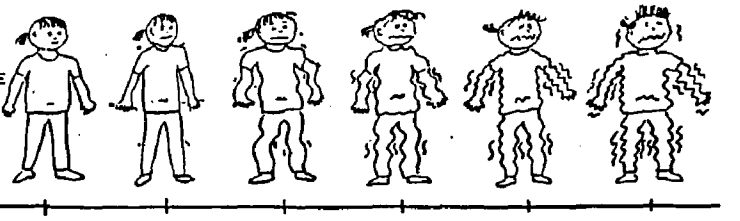
36. TEACHER YELLING AT YOU



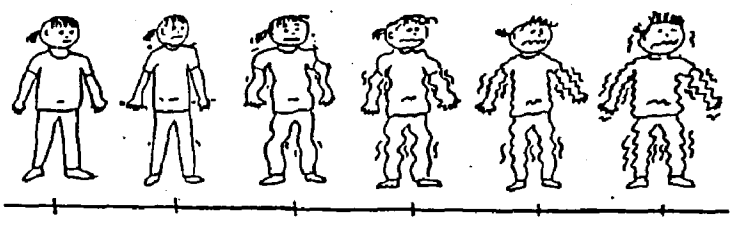
37. TEACHER DOES NOT BELIEVE YOU



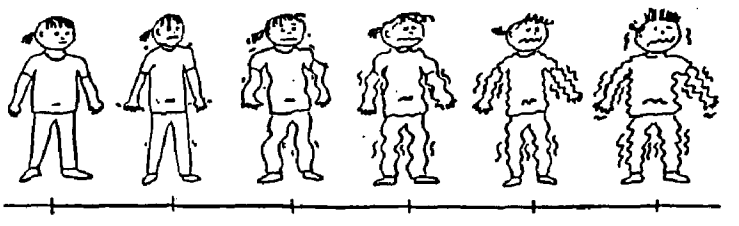
38. MAKING A MISTAKE IN FRONT OF OTHER KIDS



39. BEING LATE FOR SCHOOL

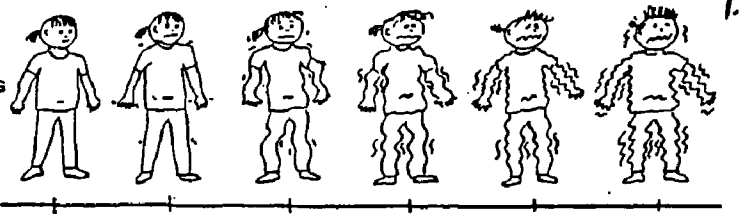


40. NOT UNDERSTANDING SOMETHING WHEN THE REST OF THE CLASS DOES

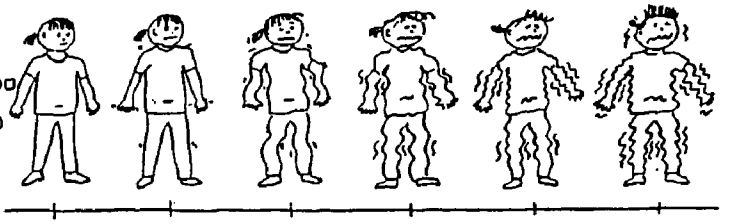


9.

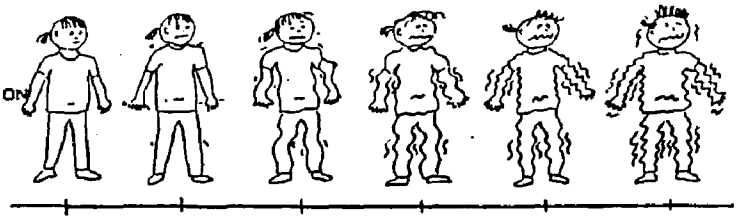
41. KIDS CORRECTING YOU WHEN YOU GIVE AN ANSWER IN CLASS



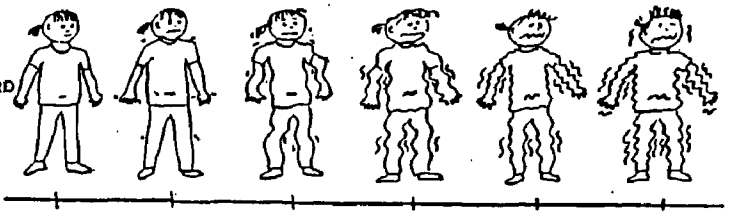
42. FORGETTING TO DO SOME WORK YOU ARE SUPPOSED TO DO



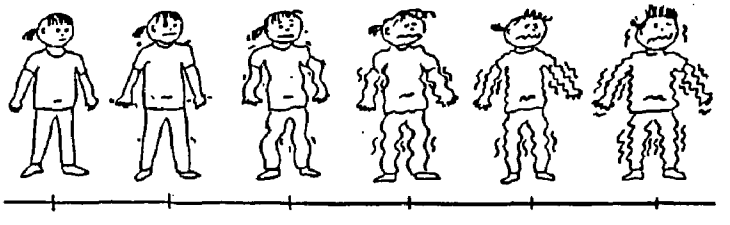
43. GETTING MANY ANSWERS WRONG ON A PAPER



44. NOT GETTING A GOOD REPORT CARD

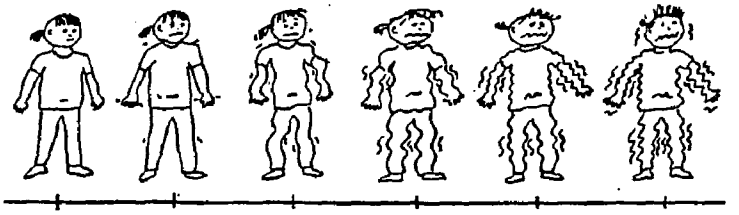


45. BEING SENT TO THE PRINCIPAL'S OFFICE BECAUSE OF MISBEHAVIOR

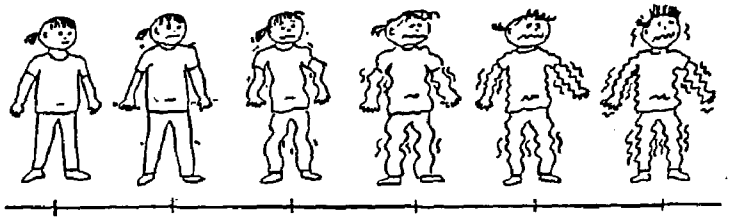


10.

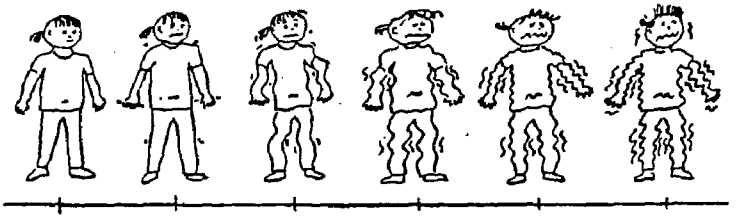
46. WETTING YOUR PANTS IN SCHOOL



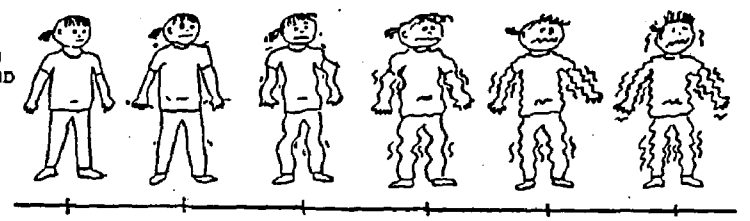
47. TAKING TESTS



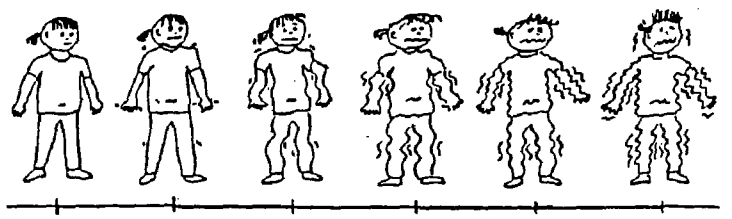
48. FIRST DAY OF SCHOOL



49. MOVING TO A NEW NEIGHBORHOOD AND A NEW SCHOOL

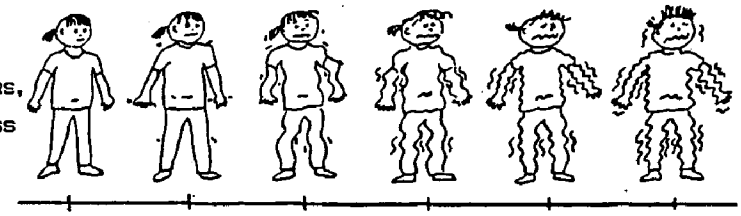


50. RIDING ON THE SCHOOL BUS

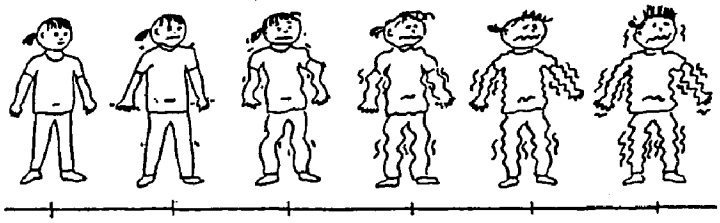


11.

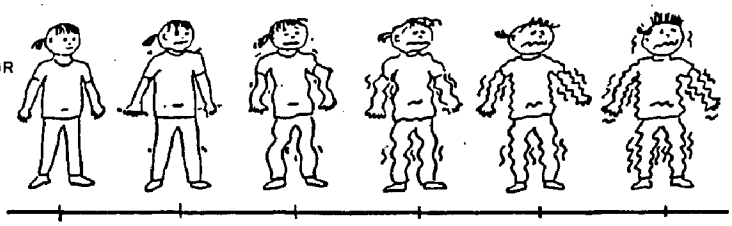
51. PERFORMING IN FRONT OF OTHERS, LIKE GIVING A REPORT IN CLASS OR PLAYING AN INSTRUMENT



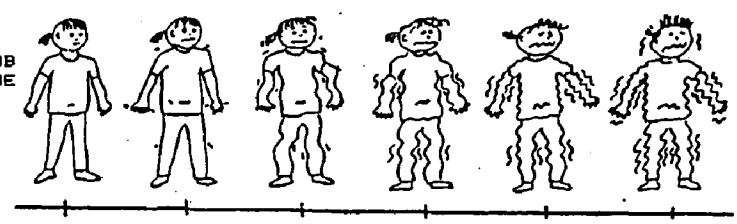
52. PARENT HAS TO STAY IN THE HOSPITAL



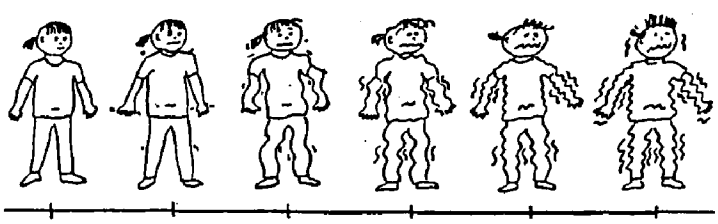
53. A GRANDPARENT OR RELATIVE MOVES INTO YOUR HOME



54. MOTHER HAS A JOB OUTSIDE THE HOME

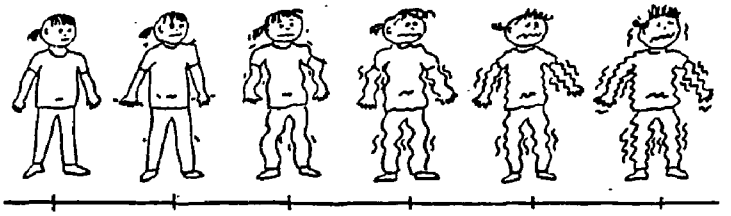


55. PARENT GETS REMARRIED AFTER A DIVORCE

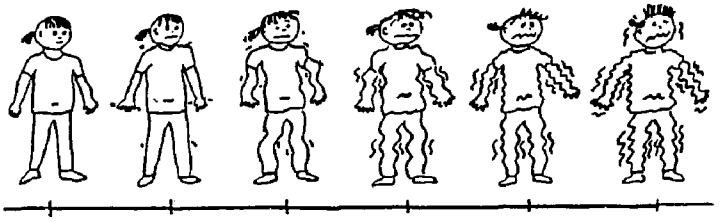


12.

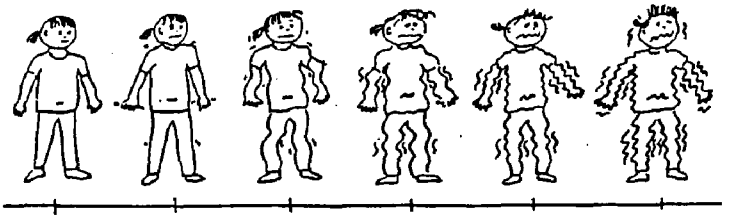
56. HAVING TO STAY BACK A YEAR IN SCHOOL



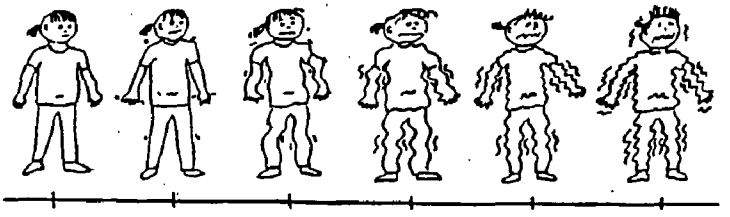
57. LOSING A GAME



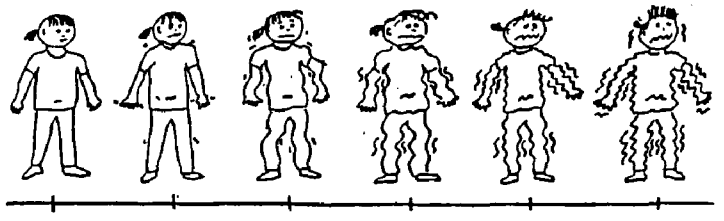
58. BEING PICKED LAST ON A TEAM



59. YOU STEAL SOMETHING AND GET CAUGHT

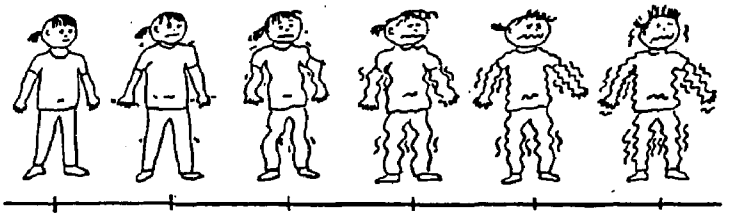


60. GOING TO THE DENTIST

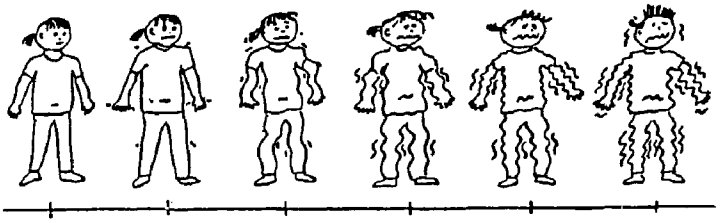


13.

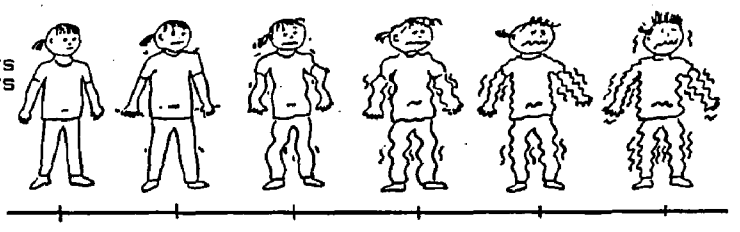
61. A BROTHER OR SISTER DIES



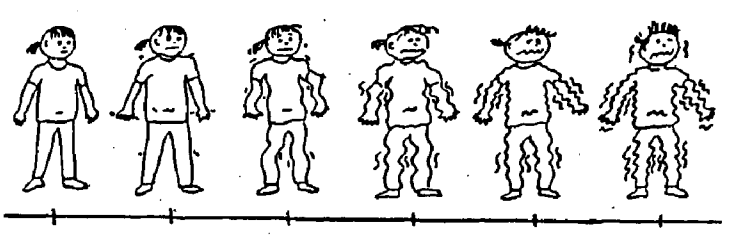
62. YOU START TO GO BLIND



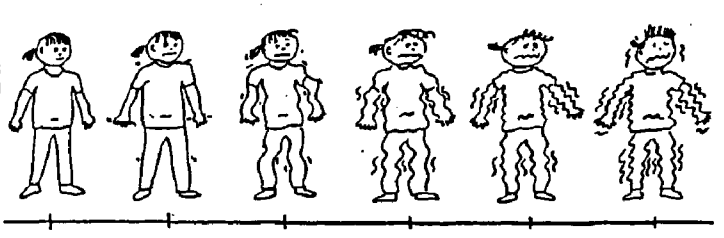
63. HAVING ARGUMENTS OR DISAGREEMENTS WITH YOUR PARENTS



64. NOT HAVING AS MUCH MONEY TO SPEND ON THINGS AS YOU USED TO

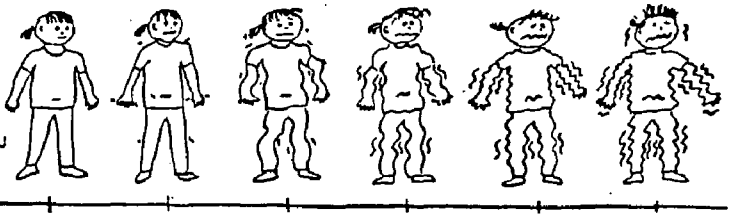


65. A STRANGER WANTS TO TALK WITH YOU

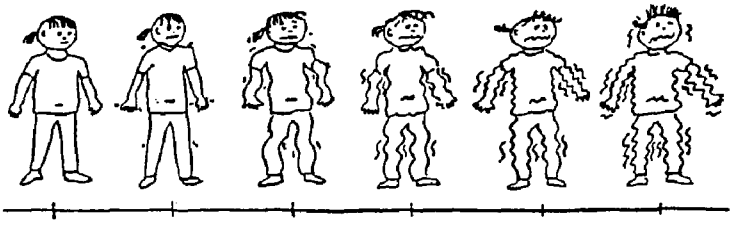


14.

66. YOU TRIED VERY HARD TO WIN AT SOMETHING OR TO DO SOMETHING IMPORTANT TO YOU AND IT JUST DIDN'T COME OUT THE WAY YOU WANTED



67. HOW DO YOU USUALLY FEEL?



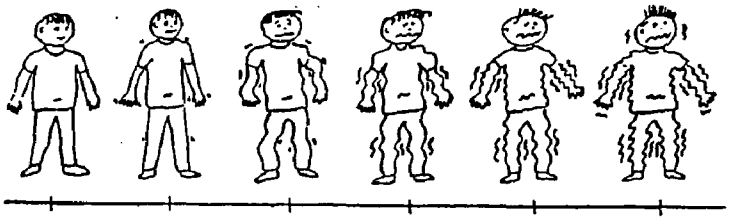
NUMBER _____ GRADE _____ AGE _____

TODAY I WOULD LIKE TO ASK YOU ABOUT SOME THINGS THAT MIGHT OR MIGHT NOT BOTHER KIDS YOUR AGE. I WILL READ EACH OF THE QUESTIONS TO YOU AND I'D LIKE YOU TO CIRCLE THE BOY OR GIRL THAT BEST MATCHES HOW YOU FEEL ABOUT EACH QUESTION.

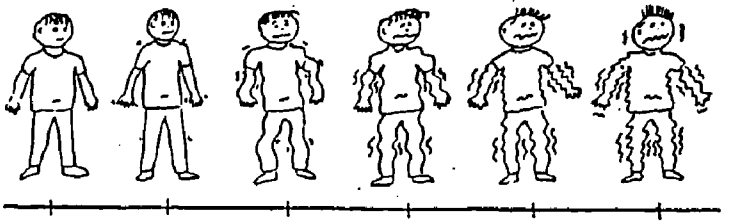
DON'T WORRY ABOUT GETTING THE RIGHT ANSWER BECAUSE THERE IS NO RIGHT ANSWER, IT ALL DEPENDS ON HOW YOU FEEL ABOUT THINGS. FOR THESE QUESTIONS SOMETIMES IT'S BEST TO CIRCLE THE ANSWER THAT FIRST POPS INTO YOUR HEAD, AND NOT TO THINK TOO LONG OR TOO HARD ABOUT ANY ONE QUESTION. ALSO, YOU DON'T HAVE ANSWER ANYTHING YOU DON'T WANT TO.

REMEMBER TO CIRCLE HOW YOU REALLY FEEL AND NOT HOW YOUR NEIGHBOR FEELS ABOUT EACH QUESTION. IT'S ALSO IMPORTANT NOT TO GO AHEAD OF THE GROUP BECAUSE SOMETIMES I EXPLAIN THE QUESTIONS A LITTLE MORE AND YOU WILL MISS THAT. I HAVE THREE PRACTICE QUESTIONS FOR YOU TO TRY SO YOU CAN SEE WHAT WE WILL BE DOING.

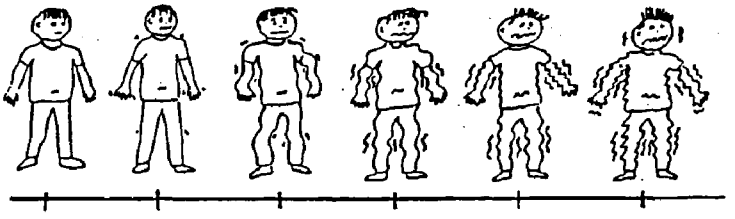
A. YOU LOSE A TOY THAT IS NOT ONE OF YOUR FAVORITES



B. YOUR TEACHER CALLS ON YOU IN CLASS AND YOU DON'T KNOW THE ANSWER

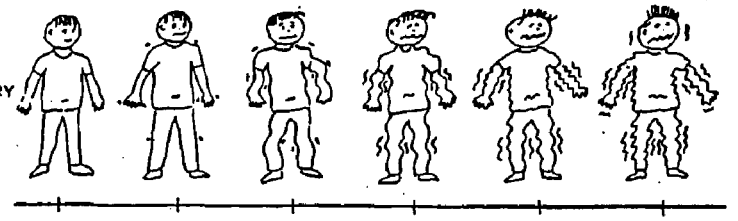


C. YOU PARACHUTE OUT OF AN AIRPLANE FOR THE FIRST TIME

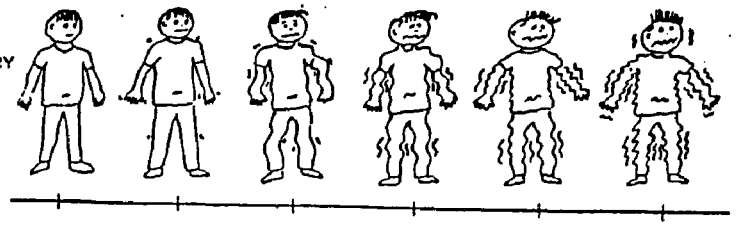


1.

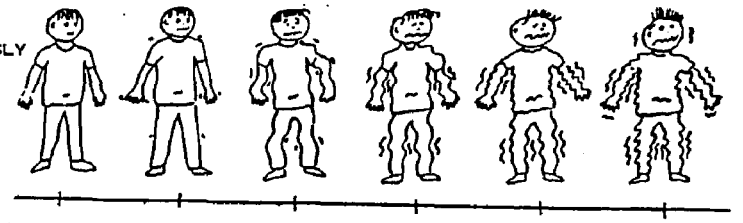
1. THINKING ABOUT GHOSTS AND SCARY THINGS



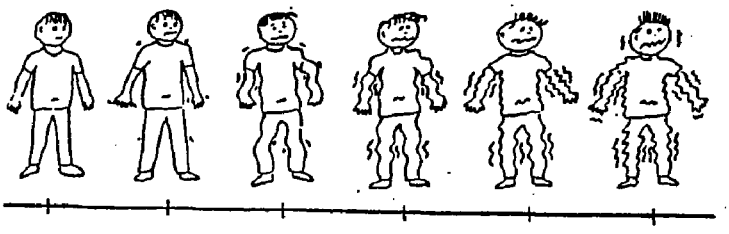
2. WATCHING A SCARY TV SHOW



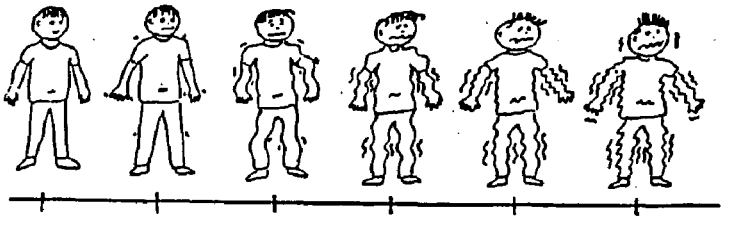
3. YOU GOT SERIOUSLY HURT OR HAD TO STAY IN THE HOSPITAL



4. MEETING NEW KIDS

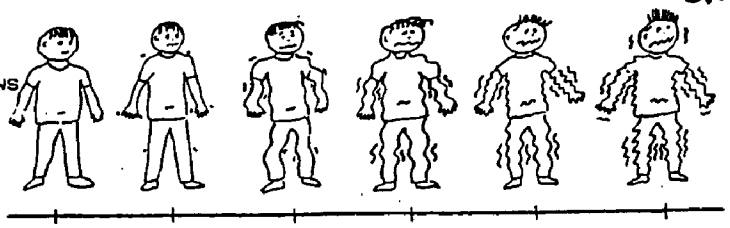


5. YOUR PET DIES

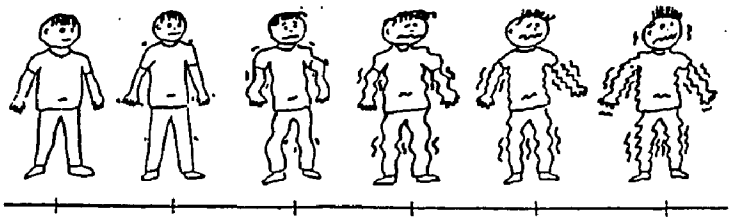


2.

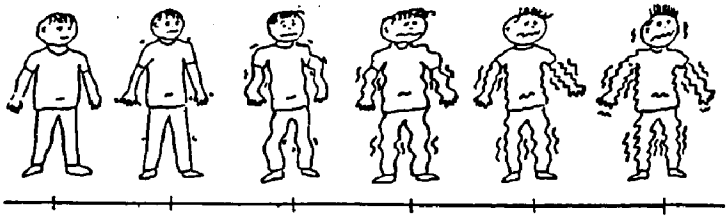
6. LISTENING TO NEWS EVENTS ABOUT BAD THINGS THAT HAPPEN IN THE WORLD



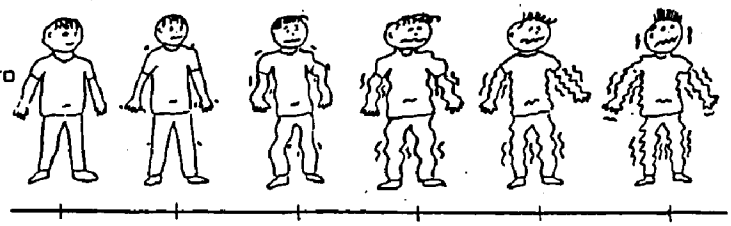
7. BEING KIDNAPPED



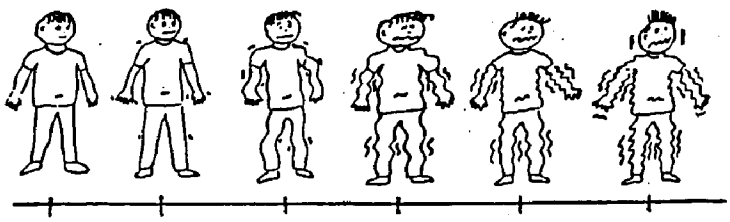
8. TRYING A NEW ACTIVITY THAT FELLS A LITTLE DANGEROUS



9. BEING BORED OR HAVING NOTHING TO DO

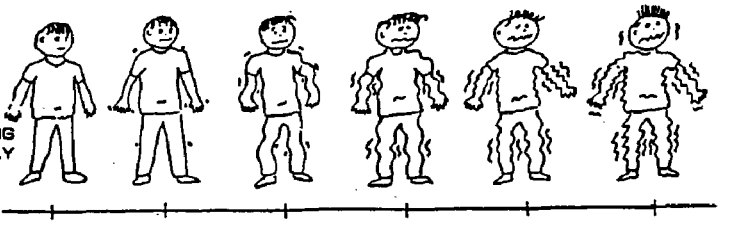


10. GETTING LOST

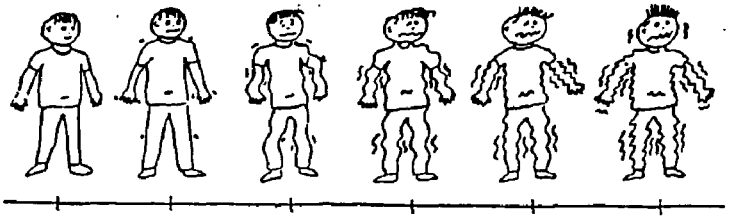


3.

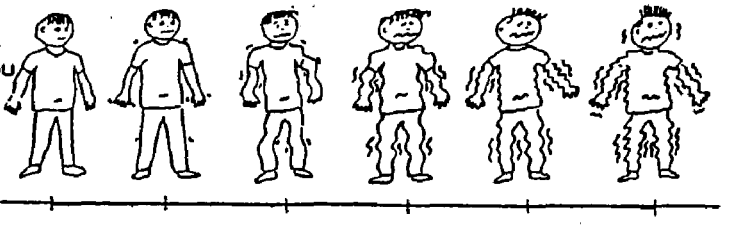
11. PARENT OR TEACHER THINKS YOU DID SOMETHING WRONG WHEN YOU REALLY DIDN'T



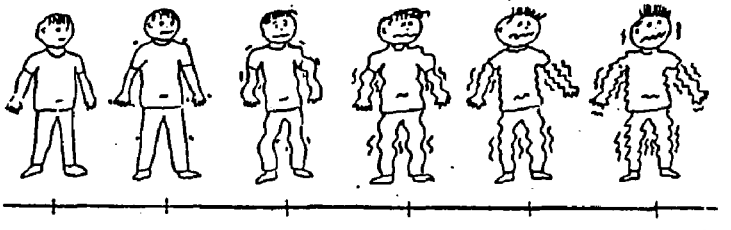
12. HEARING NOISES IN THE DARK



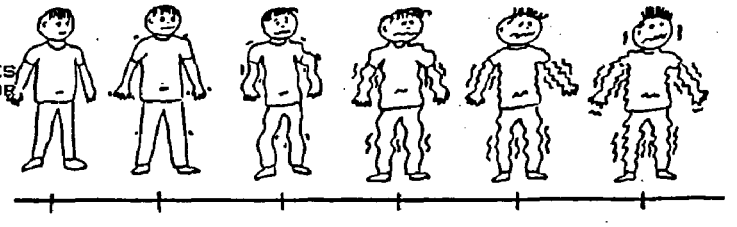
13. NOT BEING HAPPY WITH THE WAY YOU LOOK



14. A PARENT DIES

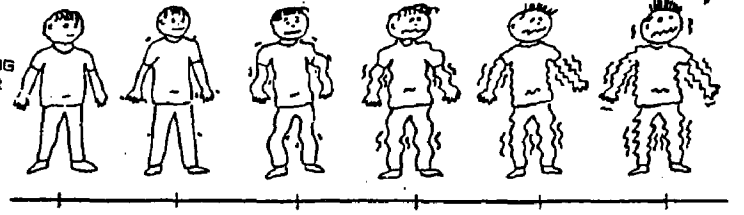


15. GRANDPARENT OR OTHER CLOSE RELATIVE BECOMES SERIOUSLY ILL OR DIES

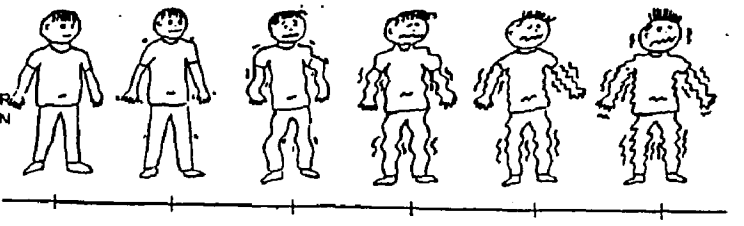


4.

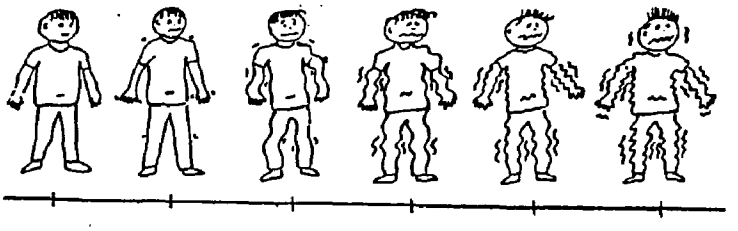
16. PARENTS FIGHTING WITH EACH OTHER



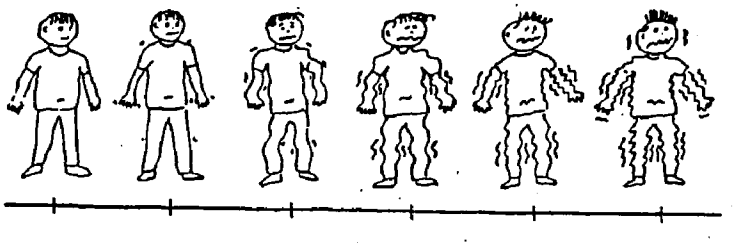
17. BROTHER OR SISTER BECOMES SERIOUSLY ILL OR HAS TO STAY IN THE HOSPITAL



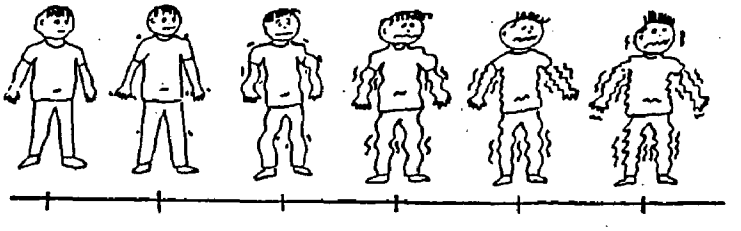
18. PARENTS GET DIVORCED



19. HAVING TOO MANY THINGS TO DO

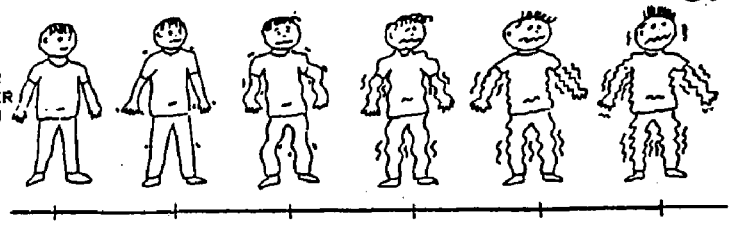


20. BROTHER OR SISTER BUGGING YOU

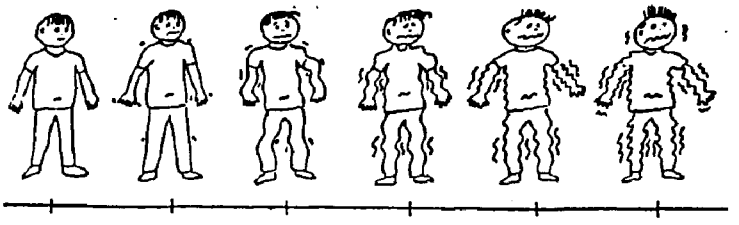


5.

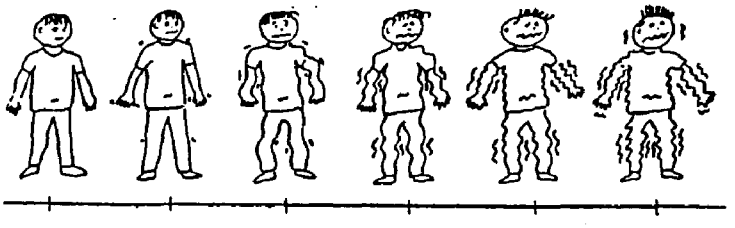
21. NOT HAVING YOUR MOTHER OR FATHER AROUND WHEN YOU WANT THEM



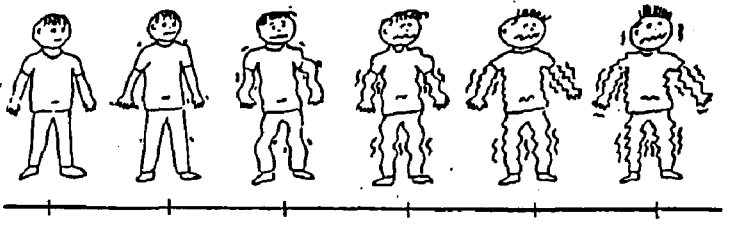
22. BEING RESPONSIBLE FOR YOUR YOUNGER BROTHER OR SISTER WHEN A PARENT IS NOT HOME



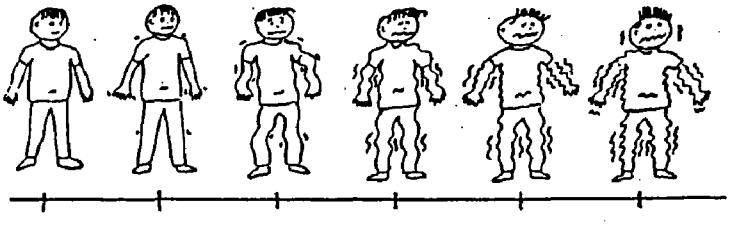
23. PARENT DOES NOT LET YOU DO THINGS



24. HAVING A NEW BABY BROTHER OR SISTER IN FAMILY

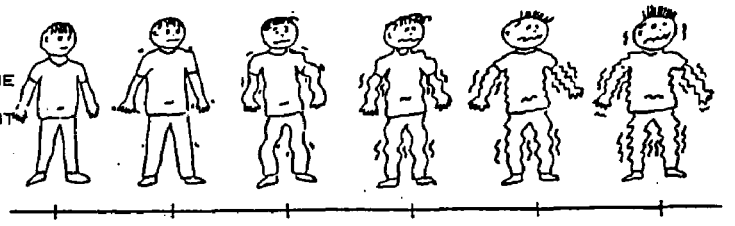


25. PARENT LOSES A JOB

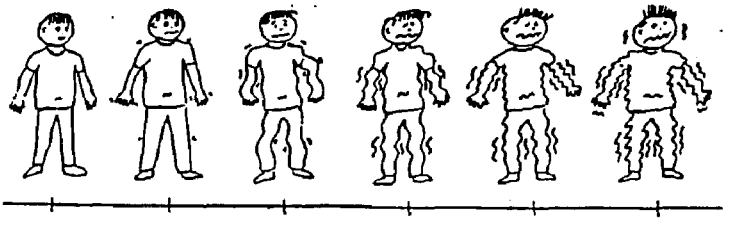


6.

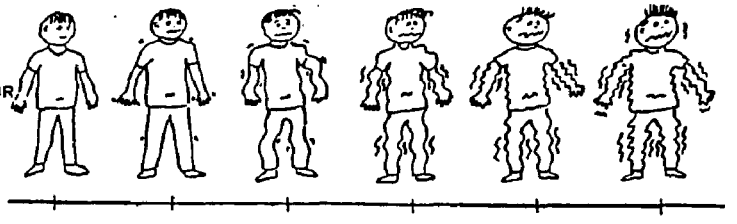
26. BEING HOME ALONE AFTER SCHOOL WITHOUT A PARENT AROUND



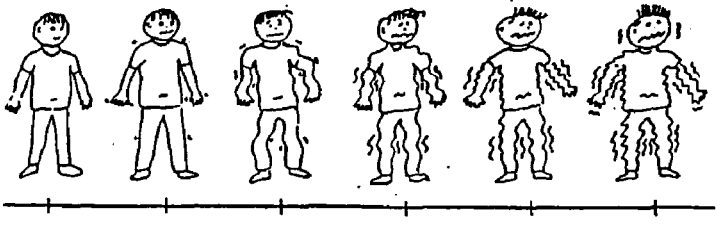
27. KIDS BUGGING OR PICKING ON YOU



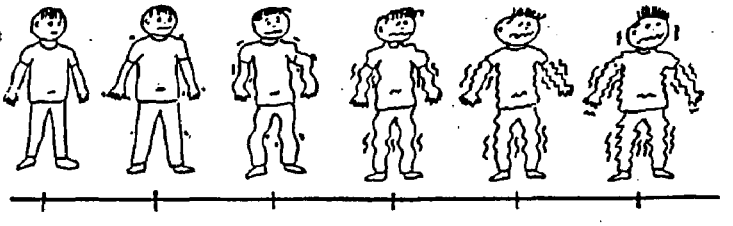
28. A GOOD FRIEND BECOMES SERIOUSLY ILL OR DIES



29. WHEN KIDS CHEAT IN GAMES OR IN SCHOOL

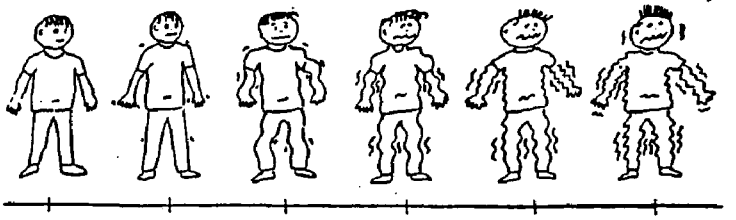


30. KIDS WANT YOU TO STEAL THINGS FROM STORES

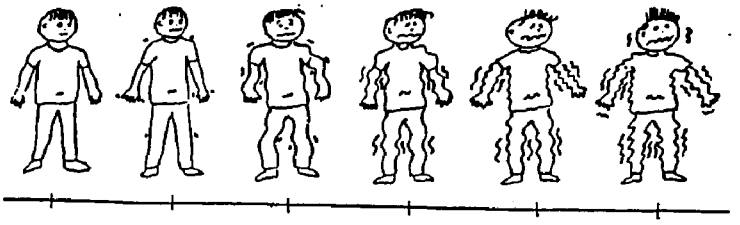


7.

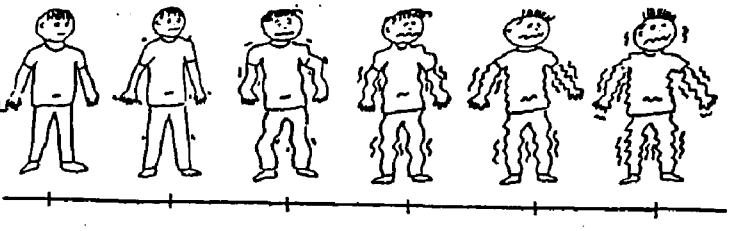
31. HAVING NO FRIENDS



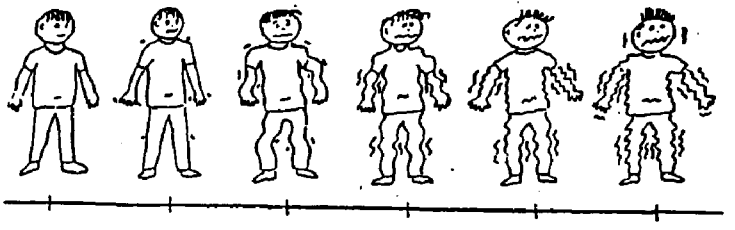
32. FIGHTS WITH FRIENDS



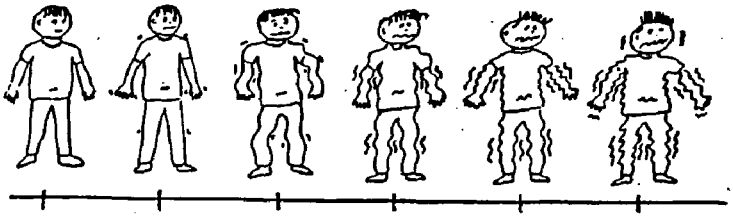
33. PLAYING ON A SPORTS TEAM AND PEOPLE ARE DEPENDING ON YOU TO DO WELL



34. NOT HAVING AS MANY TOYS OR CLOTHES AS YOUR FRIENDS HAVE

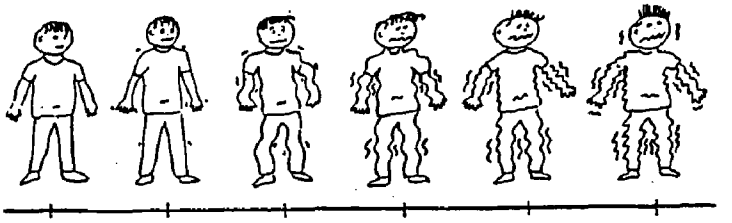


35. PARENT YELLING AT YOU

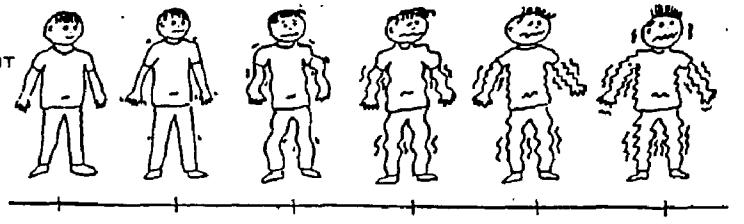


8.

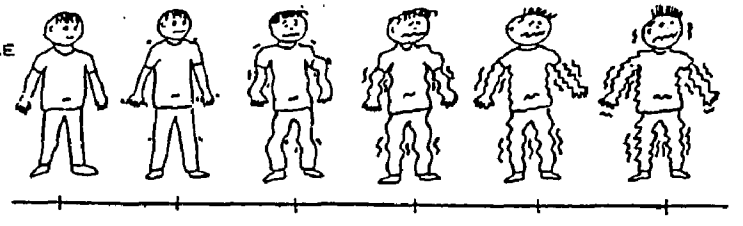
36. TEACHER YELLING AT YOU



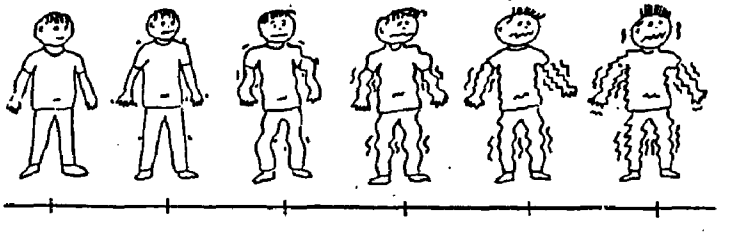
37. TEACHER DOES NOT BELIEVE YOU



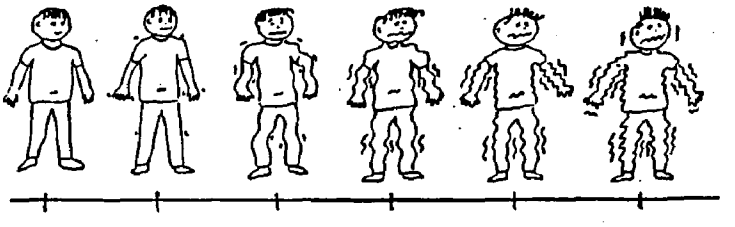
38. MAKING A MISTAKE IN FRONT OF OTHER KIDS



39. BEING LATE FOR SCHOOL

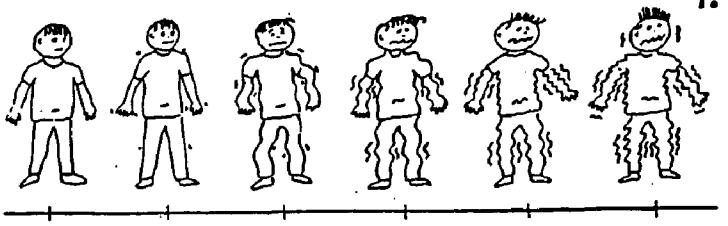


40. NOT UNDERSTANDING SOMETHING WHEN THE REST OF THE CLASS DOES

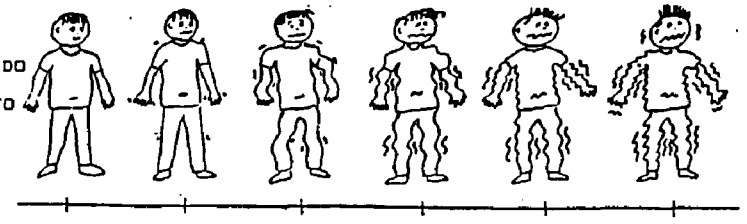


9.

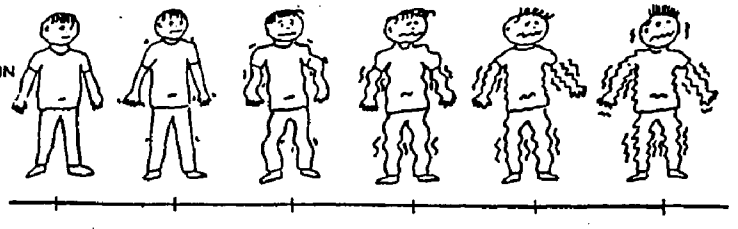
41. KIDS CORRECTING YOU WHEN YOU GIVE AN ANSWER IN CLASS



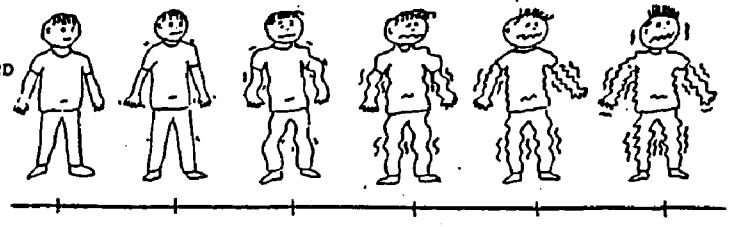
42. FORGETTING TO DO SOME WORK YOU ARE SUPPOSED TO DO



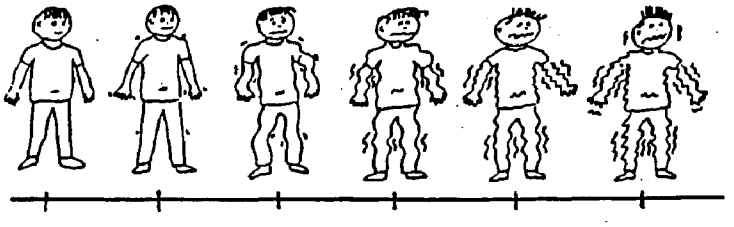
43. GETTING MANY ANSWERS WRONG ON A PAPER



44. NOT GETTING A GOOD REPORT CARD

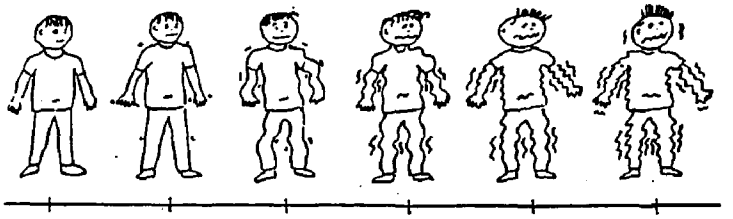


45. BEING SENT TO THE PRINCIPAL'S OFFICE BECAUSE OF MISBEHAVIOR

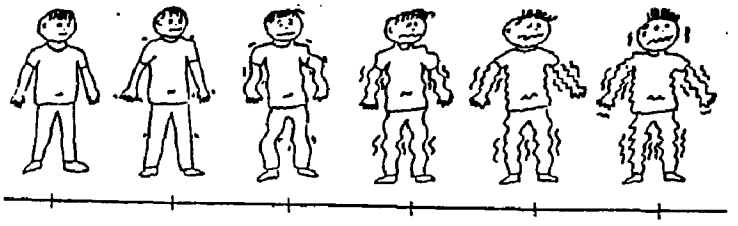


10.

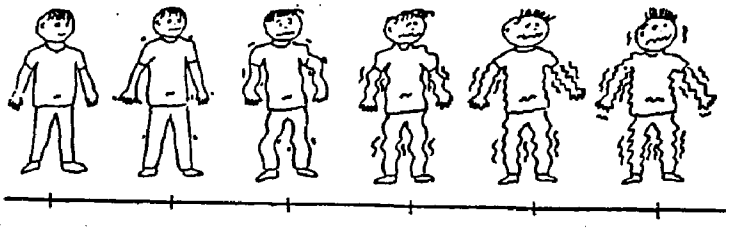
46. WETTING YOUR PANTS IN SCHOOL



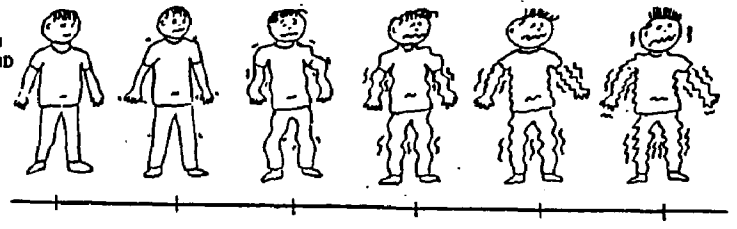
47. TAKING TESTS



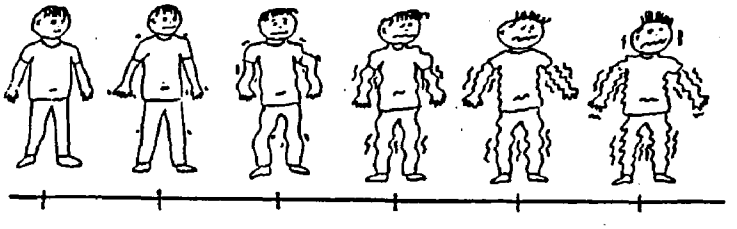
48. FIRST DAY OF SCHOOL



49. MOVING TO A NEW NEIGHBORHOOD AND A NEW SCHOOL

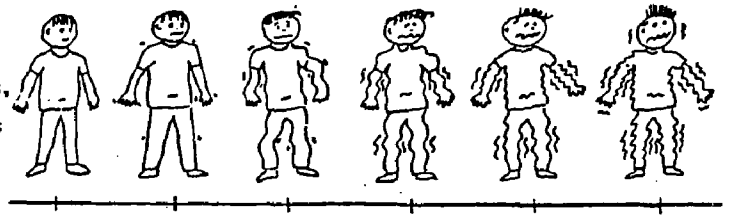


50. RIDING ON THE SCHOOL BUS

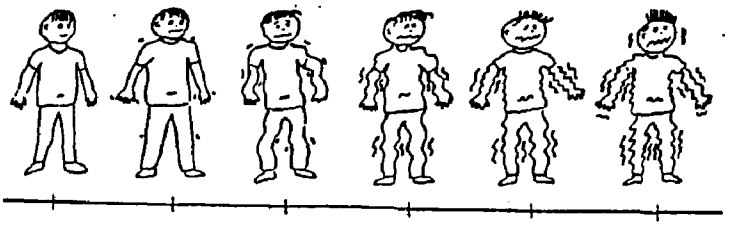


11.

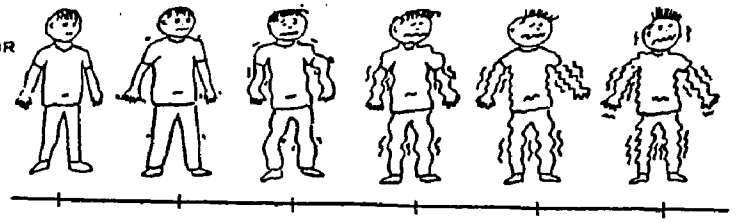
51. PERFORMING IN FRONT OF OTHERS, LIKE GIVING A REPORT IN CLASS OR PLAYING AN INSTRUMENT



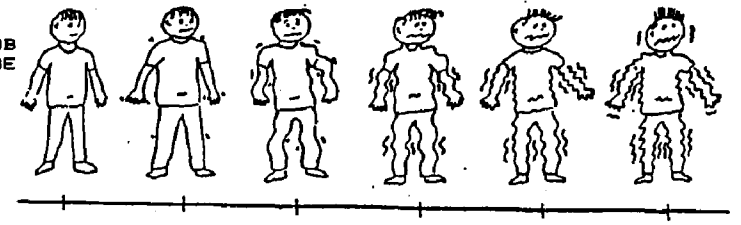
52. PARENT HAS TO STAY IN THE HOSPITAL



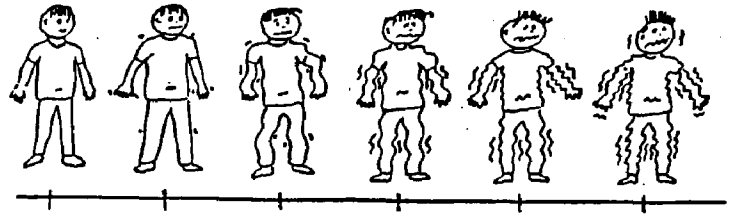
53. A GRANDPARENT OR RELATIVE MOVES INTO YOUR HOME



54. MOTHER HAS A JOB OUTSIDE THE HOME

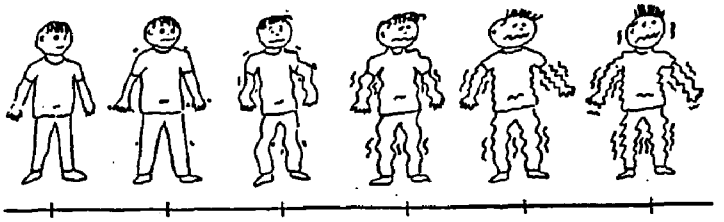


55. PARENT GETS REMARRIED AFTER A DIVORCE

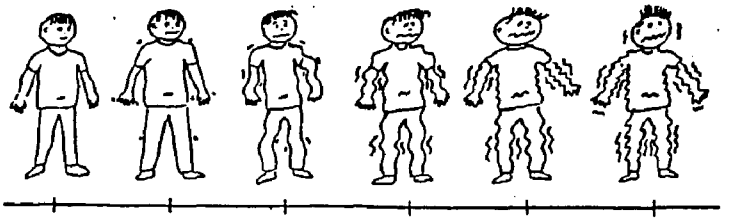


12.

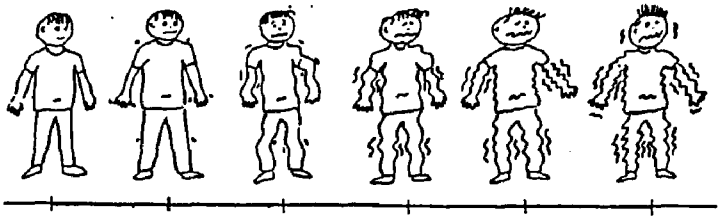
56. HAVING TO STAY BACK A YEAR IN SCHOOL.



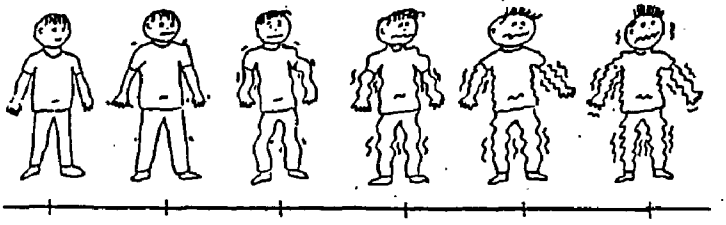
57. LOSING A GAME



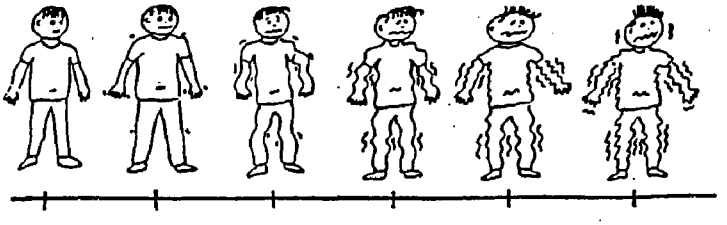
58. BEING PICKED LAST ON A TEAM



59. YOU STEAL SOMETHING AND GET CAUGHT

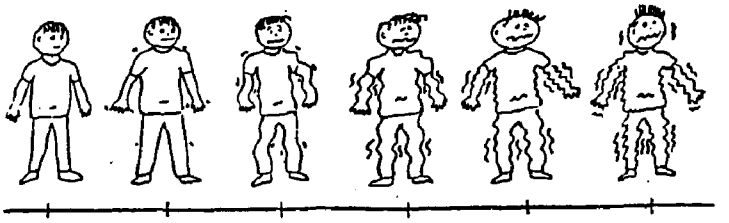


60. GOING TO THE DENTIST

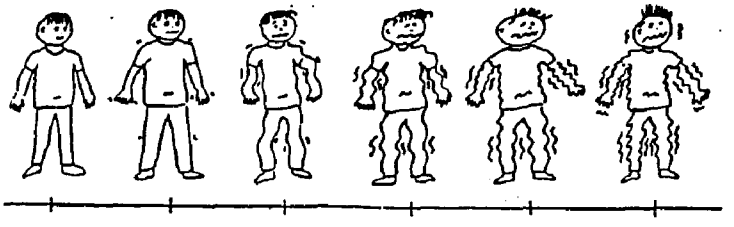


13.

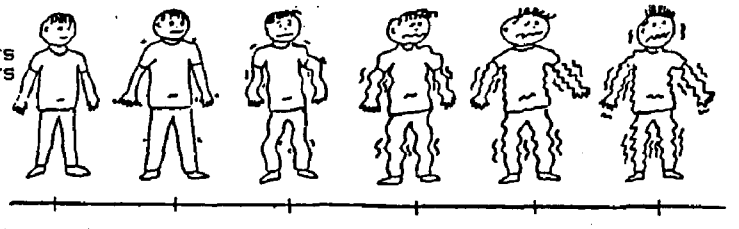
61. A BROTHER OR SISTER DIES



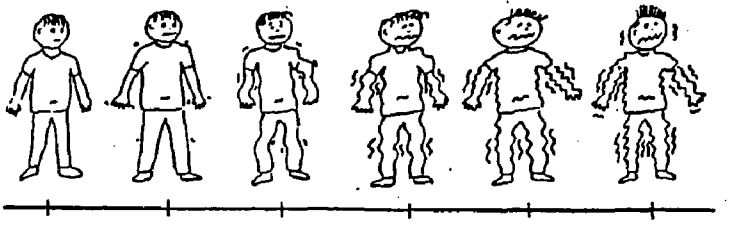
62. YOU START TO GO BLIND



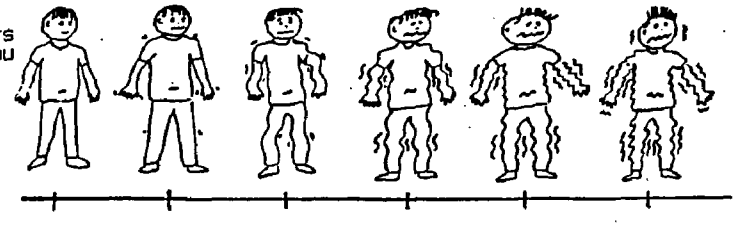
63. HAVING ARGUMENTS OR DISAGREEMENTS WITH YOUR PARENTS



64. NOT HAVING AS MUCH MONEY TO SPEND ON THINGS AS YOU USED TO

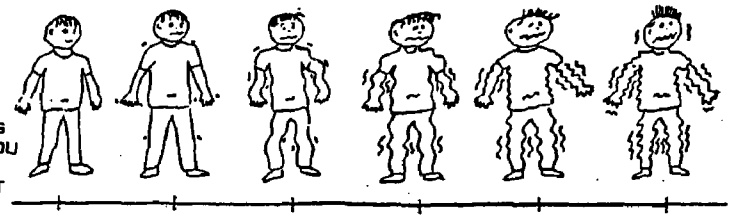


65. A STRANGER WANTS TO TALK WITH YOU

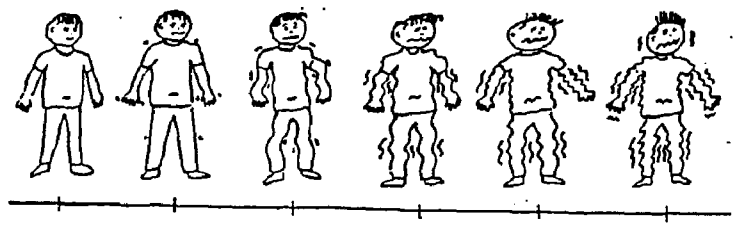


14.

66. YOU TRIED VERY HARD TO WIN AT SOMETHING OR TO DO SOMETHING IMPORTANT TO YOU AND IT JUST DIDN'T COME OUT THE WAY YOU WANTED



67. HOW DO YOU USUALLY FEEL?



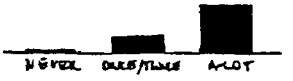
NUMBER _____ GRADE _____ AGE _____

THE FOLLOWING QUESTIONS ARE THE SAME AS THE ONES YOU ANSWERED IN THE FIRST PART OF THE QUESTIONNAIRE. NOW I WOULD LIKE YOU TO THINK ABOUT <u>WHETHER THESE EVENTS ACTUALLY HAPPENED TO YOU WITHIN THE PAST YEAR</u>. TO GIVE YOUR ANSWER, PLEASE CIRCLE EITHER NEVER, ONCE OR TWICE, OR ALOT ON THE GRAPH BESIDE EACH QUESTION. NEXT, I WILL ASK YOU <u>IF YOU WORRY ABOUT THIS EVENT</u>, OR ARE AFRAID IT WILL HAPPEN. PLEASE CIRCLE YES OR NO DEPENDING ON WHETHER THE QUESTION DESCRIBES SOMETHING YOU WORRY ABOUT.

AGAIN, DON'T WORRY ABOUT GETTING THE RIGHT ANSWER BECAUSE <u>THERE IS NO RIGHT ANSWER</u>. TRY HARD TO REMEMBER IF ANY OF THESE EVENTS HAPPENED TO YOU WITHIN THE PAST YEAR. ALSO, YOU DON'T HAVE TO ANSWER ANY QUESTIONS YOU DON'T WANT TO.

IT'S ALSO IMPORTANT NOT TO GO AHEAD OF THE GROUP BECAUSE SOMETIMES I EXPLAIN THE QUESTIONS A LITTLE MORE AND YOU WILL MISS THAT. I HAVE THREE PRACTICE QUESTIONS FOR YOU TO TRY SO THAT YOU CAN SEE WHAT WE WILL BE DOING.

A. YOU LOSE A TOY THAT IS NOT ONE OF YOUR FAVORITES



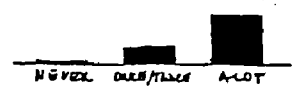
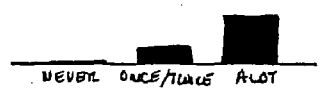
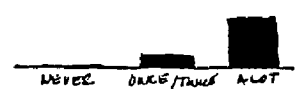
YES NO

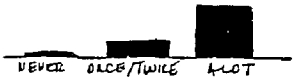
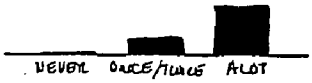
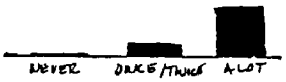
B. YOUR TEACHER CALLS ON YOU IN CLASS AND YOU DON'T KNOW THE ANSWER

YES NO

C. TAKING AN AIRPLANE RIDE

YES NO

	DID THIS HAPPEN TO YOU? (IN THE PAST YEAR)		WORRY ABOUT IT? 1.	
1.	THINKING ABOUT GHOSTS AND SCARY THINGS		YES	NO
2.	WATCHING A SCARY TV SHOW		YES	NO
3.	YOU GOT SERIOUSLY HURT OR HAD TO STAY IN THE HOSPITAL		YES	NO
4.	MEETING NEW KIDS		YES	NO
5.	YOUR PET DIES		YES	NO
6.	LISTENING TO NEWS EVENTS ABOUT BAD THINGS THAT HAPPEN IN THE WORLD		YES	NO
7.	BEING KIDNAPPED		YES	NO

DID THIS HAPPEN TO YOU? (IN THE PAST YEAR)		WORRY ABOUT IT? 2.
8. TRYING A NEW ACTIVITY THAT FELLS A LITTLE DANGEROUS		YES NO
9. BEING BORED OR HAVING NOTHING TO DO		YES NO
10. GETTING LOST		YES NO
11. PARENT OR TEACHER THINKS YOU DID SOMETHING WRONG WHEN YOU REALLY DIDN'T		YES NO
12. HEARING NOISES IN THE DARK		YES NO
13. NOT BEING HAPPY WITH THE WAY YOU LOOK		YES NO
14. A PARENT DIES		YES NO

DID THIS HAPPEN TO YOU? (IN THE PAST YEAR)

3. WORRY ABOUT IT?

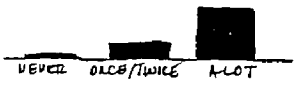
15. GRANDPARENT OR OTHER CLOSE RELATIVE BECOMES SERIOUSLY ILL OR DIES

YES NO

16. PARENTS FIGHTING WITH EACH OTHER

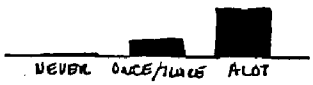
YES NO

17. BROTHER OR SISTER BECOMES SERIOUSLY ILL OR HAS TO STAY IN THE HOSPITAL



YES NO

18. PARENTS GET DIVORCED

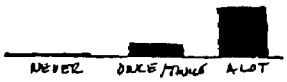


YES NO

19. HAVING TOO MANY THINGS TO DO

YES NO

20. BROTHER OR SISTER BUGGING YOU

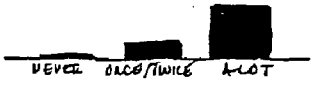


YES NO

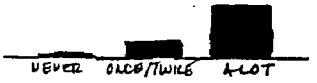
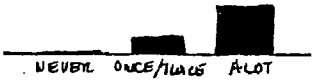
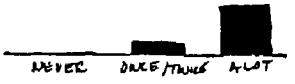
21. NOT HAVING YOUR MOTHER OR FATHER AROUND WHEN YOU WANT THEM

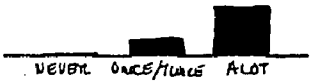
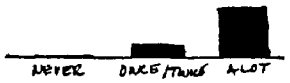
YES NO

4.

	DID THIS HAPPEN TO YOU? (IN THE PAST YEAR)		WORRY ABOUT IT?	
22.	BEING RESPONSIBLE FOR YOUR YOUNGER BROTHER OR SISTER WHEN A PARENT IS NOT HOME		YES	NO
23.	PARENT DOES NOT LET YOU DO THINGS		YES	NO
24.	HAVING A NEW BABY BROTHER OR SISTER IN FAMILY		YES	NO
25.	PARENT LOSES A JOB		YES	NO
26.	BEING HOME ALONE AFTER SCHOOL WITHOUT A PARENT AROUND		YES	NO
27.	KIDS BUGGING OR PICKING ON YOU		YES	NO
28.	A GOOD FRIEND BECOMES SERIOUSLY ILL OR DIES		YES	NO

DID THIS HAPPEN TO YOU? (IN THIS PAST YEAR) | WORRY ABOUT IT? | 5.

29. WHEN KIDS CHEAT IN GAMES OR IN SCHOOL		YES	NO
30. KIDS WANT YOU TO STEAL THINGS FROM STORES		YES	NO
31. HAVING NO FRIENDS		YES	NO
32. FIGHTS WITH FRIENDS		YES	NO
33. PLAYING ON A SPORTS TEAM AND PEOPLE ARE DEPENDING ON YOU TO DO WELL		YES	NO
34. NOT HAVING AS MANY TOYS OR CLOTHES AS YOUR FRIENDS HAVE		YES	NO
35. PARENT YELLING AT YOU		YES	NO

DID THIS HAPPEN TO YOU? (IN THE PAST YEAR)		WORRY ABOUT IT: 6.
36. TEACHER YELLING AT YOU		YES NO
37. TEACHER DOES NOT BELIEVE YOU		YES NO
38. MAKING A MISTAKE IN FRONT OF OTHER KIDS		YES NO
39. BEING LATE FOR SCHOOL		YES NO
40. NOT UNDERSTANDING SOMETHING WHEN THE REST OF THE CLASS DOES		YES NO
41. KIDS CORRECTING YOU WHEN YOU GIVE AN ANSWER IN CLASS		YES NO
42. FORGETTING TO DO SOME WORK YOU ARE SUPPOSED TO DO		YES NO

7.

DID THIS HAPPEN TO YOU? (IN THE PAST YEAR) | WORRY ABOUT IT?

43. GETTING MANY ANSWERS WRONG ON A PAPER

YES NO

44. NOT GETTING A GOOD REPORT CARD

YES NO

45. BEING SENT TO THE PRINCIPAL'S OFFICE BECAUSE OF MISBEHAVIOR

YES NO

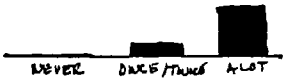
46. WETTING YOUR PANTS IN SCHOOL

YES NO

47. TAKING TESTS

YES NO

48. FIRST DAY OF SCHOOL



YES NO

49. MOVING TO A NEW NEIGHBORHOOD AND A NEW SCHOOL

YES NO

8.

DID THIS HAPPEN TO YOU? (IN THE PAST YEAR)

WORRY ABOUT IT?

50. RIDING ON THE SCHOOL BUS

YES NO

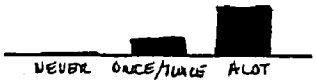
51. PERFORMING IN FRONT OF OTHERS, LIKE GIVING A REPORT IN CLASS OR PLAYING AN INSTRUMENT

YES NO

52. PARENT HAS TO STAY IN THE HOSPITAL

YES NO

53. A GRANDPARENT OR RELATIVE MOVES INTO YOUR HOME

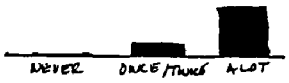


YES NO

54. MOTHER HAS A JOB OUTSIDE THE HOME

YES NO

55. PARENT GETS REMARRIED AFTER A DIVORCE



YES NO

56. HAVING TO STAY BACK A YEAR IN SCHOOL

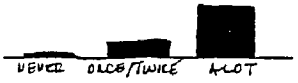
YES NO

9.

DID THIS HAPPEN TO YOU? (IN THE PAST YEAR) | WORRY ABOUT IT?

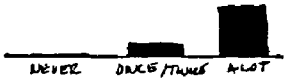
57. LOSING A GAME  YES NO

58. BEING PICKED LAST ON A TEAM  YES NO

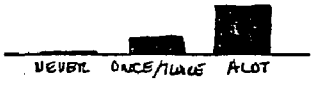
59. YOU STEAL SOMETHING AND GET CAUGHT  YES NO

60. GOING TO THE DENTIST  YES NO

61. A BROTHER OR SISTER DIES  YES NO

62. YOU START TO GO BLIND  YES NO

63. HAVING ARGUMENTS OR DISAGREEMENTS WITH YOUR PARENTS  YES NO

	DID THIS HAPPEN TO YOU? (IN THE PAST YEAR)		WORRY ABOUT IT? 10.	
64.	NOT HAVING AS MUCH MONEY TO SPEND ON THINGS AS YOU USED TO		YES	NO
65.	A STRANGER WANTS TO TALK WITH YOU		YES	NO
66.	YOU TRIED VERY HARD TO WIN AT SOMETHING OR TO DO SOMETHING AND IT JUST DIDN'T COME OUT THE WAY YOU WANTED IT TO		YES	NO
67.	HOW OFTEN DID YOU FEEL NERVOUS OR UPTIGHT?		YES	NO

APPENDIX H

PSYCHOSOMATIC SYMPTOM CHECKLIST
(Achenback & Edelbrock, 1983)

NUMBER_____ GRADE_____ BOY OR GIRL (CIRCLE ONE)

THE PSYCHOSOMATIC SYMPTOM CHECKLIST (PSC)

BELOW IS A LIST OF ITEMS WHICH MAY DESCRIBE CHILDREN OF YOUR AGE. FOR EACH ITEM WHICH DESCRIBES YOU NOW OR WITHIN THE PAST YEAR PLEASE CIRCLE

THE YES IF THE ITEM IS VERY TRUE OF YOU,
THE SOMETIMES IF THE ITEM IS SOMETIMES TRUE OF YOU
THE NO IF THE ITEM IS NOT TRUE AT ALL OF YOU.

HAVE FEARS ABOUT GOING TO SCHOOL	YES	SOMETIMES	NO
FEEL DIZZY	YES	SOMETIMES	NO
HAVE ACHES OR PAINS IN YOUR BODY	YES	SOMETIMES	NO
HAVE HEADACHES	YES	SOMETIMES	NO
FEEL SICK IN YOUR STOMACH (NAUSEA)	YES	SOMETIMES	NO
HAVE PROBLEMS WITH YOUR EYES	YES	SOMETIMES	NO
HAVE STOMACH ACHES OR CRAMPS	YES	SOMETIMES	NO
HAVE VOMITING OR THROWING UP	YES	SOMETIMES	NO
GET HURT OR GET INTO ACCIDENTS	YES	SOMETIMES	NO
GET CONSTIPATED	YES	SOMETIMES	NO
FEEL ANXIOUS OR FEARFUL	YES	SOMETIMES	NO
FEEL OVER-TIRED	YES	SOMETIMES	NO
GET RASHES OR SKIN PROBLEMS	YES	SOMETIMES	NO
FIND YOURSELF STARING OR SPACING OUT	YES	SOMETIMES	NO
HAVE LOW ENERGY	YES	SOMETIMES	NO
WORRY ABOUT THINGS	YES	SOMETIMES	NO
HAVE TROUBLE SLEEPING	YES	SOMETIMES	NO
GET BUTTERFLIES IN YOUR STOMACH	YES	SOMETIMES	NO
FEEL FAINT	YES	SOMETIMES	NO
FEEL LIKE YOU CAN'T CONCENTRATE	YES	SOMETIMES	NO
FEEL PRESSURED	YES	SOMETIMES	NO

APPENDIX I

LIFE EVENTS SCALE FOR CHILDREN (CODDINGTON, 1985)

Please indicate those events that have occurred *in the life of your child* during the past year.

___ The death of a parent

___ The death of a brother or sister

___ Divorce of your parents

___ Marital separation of your parents

___ The death of a grandparent

___ Hospitalization of a parent

___ Remarriage of a parent to a step-parent

___ Birth of a brother of sister

___ Hospitalization of a brother or sister

___ Loss of a job by your father or mother

___ Major increase in your parent's income

___ Major decrease in your parent's income

___ Start of a new problem between your parents

___ End of a problem between your parents

___ Change in father's job so he has less time home

___ A new adult moving into your home

___ Mother beginning to work outside the home

___ Being told you are very attractive by a friend

___ Beginning the first grade

___ Move to a new school district

___ Failing a grade in school

___ Suspension from school

___ Start of a new problem between you and your parents

___ End of a problem between you and your parents

___ Recognition for excelling in a sport or other activity

___ Appearance in juvenile court

___ Failing to achieve something you really wanted

___ Becoming an adult member of a church

___ Being invited to join a social organization

___ Death of a pet

___ Being hospitalized for illness or injury

___ Death of a close friend

___ Becoming involved with drugs

___ Stopping the use of drugs

___ Finding an adult who really respects you

___ Outstanding personal achievement (special prize)

APPENDIX J

DEMOGRAPHIC QUESTIONNAIRE

YOUR RELATIONSHIP TO THE TARGET CHILD:
MOTHER_____ FATHER_____ GUARDIAN_____ OTHER (SPECIFY)_____

NUMBER OF CHILDREN IN YOUR FAMILY: _____

BIRTH ORDER OF THE TARGET CHILD: FIRST BORN____ ONLY____
SECOND BORN____ THIRD BORN____ FOURTH BORN_____ OTHER_____

MARITAL STATUS:
MARRIED___ SEPARATED___ DIVORCED___ WIDOWED___ SINGLE___

WHAT IS THE APPROXIMATE ANNUAL INCOME LEVEL OF YOUR FAMILY?
UP TO $4,999___ $5-9,999___ $10-14,999___ $15-19,999___
$20-29,999___ $30-50,000___ OVER $50,000___

MOTHER'S OCCUPATION:
HOUSEWIFE_____ FULL-TIME_____ PART-TIME_____
OTHER_____ FULL-TIME_____ PART-TIME_____

FATHER'S OCCUPATION:
HOUSEHUSBAND _____ FULL-TIME____ PART-TIME_____
OTHER_____ FULL-TIME____ PART-TIME_____

MOTHER'S EDUCATION:
LESS THAN H.S___ H.S.___ SOME COLLEGE___
COLLEGE DEGREE___ ADVANCED DEGREE___

FATHER'S EDUCATION:
LESS THAN H.S___ H.S.___ SOME COLLEGE___
COLLEGE DEGREE___ ADVANCED DEGREE___

HIGHEST LEVEL OF EDUCATION YOU EXPECT TARGET CHILD TO ATTAIN?
LESS THAN H.S___ H.S.___ SOME COLLEGE___
COLLEGE DEGREE___ ADVANCED DEGREE___

HOW WOULD YOU RATE <u>YOUR</u> STRESS LEVEL DURING THE PAST YEAR?
1 2 3 4 5 6 7

NONE MODERATE EXTREME

HOW MANY DOCTOR/HOSPITAL VISITS HAS YOUR CHILD HAD (OTHER THAN FOR ROUTINE CHECKUPS) WITHIN THE PAST YEAR:_____

APPROXIMATE NUMBER OF DAYS YOUR CHILD WAS ABSENT FROM SCHOOL DURING THE PAST YEAR:

0 - 5 DAYS_____
6 - 10 DAYS_____
11 - 15 DAYS_____
16 - 20 DAYS_____
21 - 25 DAYS_____
26 - 30 DAYS_____
31 - 35 DAYS_____
36 - 40 DAYS_____
41 - 45 DAYS_____
46 - 50 DAYS_____
51 - 55 DAYS_____
56 - 60 DAYS_____

* WOULD YOU LIKE ANOTHER COPY OF THE STRESS QUESTIONNAIRE FOR YOUR SPOUSE TO COMPLETE?
YES___ NO___

APPENDIX K

INSTRUCTION LETTER TO PARENTS - TIME 1

UNIVERSITY OF NEW HAMPSHIRE

Department of Psychology
Conant Hall
Durham, New Hampshire 03824-3567

October 1986

Dear PARENTS,

Thank you for your interest in the Stress Project at York Elementary School. I sincerely hope this project will prove to be interesting and informative to both you and your child.

I have enclosed the data sheets for the initial part of the study. You have received a copy of the stress questionnaire, coping questionnaire, and anxiety scale ("What I Think and Feel"); all of which your child completed at school this week. Please complete these forms as you think your child would. Also, please do not consult with your child on any of the questions at this time, since that would make your information invalid. In addition, you have received a demographics sheet, the Life Events Scale for Children, and the Child Behavior Checklist; none of which your child has seen. All of these ask questions regarding your child, but do not ask you to take your child's perspective into account. You are not obliged to answer any questions you do not wish to.

I am requesting that mothers or primary caregivers complete the questionnaires. If fathers wish to complete the stress questionnaire as well, please check the appropriate block on the demographics sheet and a copy will be sent to you.

The confidentiality of all information is protected in the following way. These forms were sent to you by the secretary at the elementary school who has access to participant's names and numbers. Please use the enclosed envelope and return the completed forms to me at the University of New Hampshire. Your return address will be your subject number and the elementary school address. In that way no names will be associated with your information, and none of your responses will go to the elementary school. Please do not put your name on any of these questionnaires.

Because of the nature of this project, it is important that both parents and children complete these forms within approximately the same time period. Therefore, I would appreciate your returning all forms within one week of when you receive this packet. One month later, the secretary will send you the stress questionnaire only to be completed a second time. Your response to this questionnaire will end your active envolvement in this project.

In the Spring, you will receive a report of the findings and be invited to attend parent informational meetings to discuss group results. If you have any questions about the completing the questionnaires, please call me at the elementary school, I will be there through mid-November.

Again, my sincere thanks for participating in this project. I am confident that with your help, the results from this study will benefit the lives of children in many ways.

Sincerely,

Maryann Corsello

APPENDIX L

INSTRUCTION LETTER TO PARENTS - TIME 2

UNIVERSITY OF NEW HAMPSHIRE

Department of Psychology
Conant Hall
Durham, New Hampshire 03824-3567

December 1986

Dear PARENTS,

Enclosed is the second set of Stress Questionnaires for the final portion of the Stress Project. The purpose of answering these questions a second time is to establish the reliability or stability of answers to the Stress Questionnaire. If the Stress Questionnaire is to be a useful instrument, it is very important to obtain a measure of how stable the answers are over a period of time.

Thankfully, the time involved to complete these forms should be no more than 15-20 minutes. I realize that your schedules are very full, especially at this time of year, so I am extremely grateful for your help.

Again, the instructions are the same as before. The mother or primary caregiver should complete the forms as she or he thinks the child would respond. Please do not consult with your child on any of the answers while you are completing the forms. I have enclosed an envelope addressed to me at UNH to use in returning the questionnaires. Please try to mail the forms back by Wednesday December 10th.

Mailing of the forms ends your active involvement in the Stress Project. I will spend the next several months analyzing the data and will have a copy of the results sent to you sometime in the Spring. At that time, if there is enough interest, I will meet with groups of parents to discuss the results of the study in more detail and to answer any questions.

I sincerely hope that the project was a positive experience for both you and your child. I am confident that the information you have provided will lead to much needed improvements in the way we understand and eventually treat childhood stress. Without your help and the help of your child, our knowledge of the sources of childhood stress would still rest on untested assumptions and biases. With gratitude, I thank you.

Sincerely,

Maryann Corsello

APPENDIX M

SUMMARY TABLE FOR MULITVARIATE ANALYSIS OF VARIANCE TESTING DIFFERENCES IN SCORES ON RCMAS, PSC, STRESS, FREQUENCY, AND WORRY SUBSCALES OF THE CSAS. GROUPING IS BY GRADE AND SEX -- CHILD DATA.

IV	DV	Univariate F	df	p
Grade	Stress	4.176	3/194	0.007
	Frequency	2.034	3/194	0.110
	Worry	3.193	3/194	0.025
	RCMAS	0.919	3/194	0.433
	PSC	0.282	3/194	0.838
Sex	Stress	19.240	1/194	0.000
	Frequency	1.719	1/194	0.191
	Worry	22.170	1/194	0.000
	RCMAS	17.275	1/194	0.000
	PSC	14.297	1/194	0.000
Grade X Sex	Stress	3.714	3/194	0.012
	Frequency	1.694	3/194	0.170
	Worry	0.723	3/194	0.539
	RCMAS	1.630	3/194	0.184
	PSC	1.759	3/194	0.156

APPENDIX N

SUMMARY TABLE FOR MULTIVARIATE ANALYSIS OF VARIANCE TESTING DIFFERENCES IN SCORES ON RCMAS, PSC, STRESS, FREQUENCY, AND WORRY SUBSCALES OF THE CSAS. MANOVAS ARE PERFORMED SEPARATELY FOR STATUS, INCOME, AND BIRTH ORDER -- CHILD DATA.

IV	DV	Univariate F	df	p
Status	Stress	0.227	1/200	0.634
	Frequency	0.438	1/200	0.509
	Worry	0.182	1/200	0.670
	RCMAS	2.580	1/200	0.110
	PSC	0.091	1/200	0.763
Income	Stress	2.640	3/198	0.051
	Frequency	1.187	3/198	0.316
	Worry	1.316	3/198	0.270
	RCMAS	1.458	3/198	0.227
	PSC	0.325	3/198	0.807
Birth Order	Stress	0.662	3/198	0.576
	Frequency	0.856	3/198	0.465
	Worry	0.435	3/198	0.728
	RCMAS	0.358	3/198	0.784
	PSC	0.922	3/198	0.431

APPENDIX O

SUMMARY TABLE FOR MULTIVARIATE ANALYSIS OF VARIANCE TESTING DIFFERENCES IN SCORES ON RCMAS, CBCL, STRESS, FREQUENCY, AND WORRY SUBSCALES OF THE CSAS. GROUPING IS BY GRADE AND SEX -- PARENT DATA.

IV	DV	Univariate F	df	p
Grade	Stress	0.439	3/170	0.726
	Frequency	2.230	3/170	0.087
	Worry	0.481	3/170	0.696
	RCMAS	0.718	3/170	0.543
	CBCL	0.340	3/170	0.796
Sex	Stress	0.783	1/170	0.377
	Frequency	0.742	1/170	0.390
	Worry	3.284	1/170	0.072
	RCMAS	0.007	1/170	0.932
	CBCL	1.809	1/170	0.180
Grade X Sex	Stress	1.401	3/170	0.244
	Frequency	0.598	3/170	0.617
	Worry	0.809	3/170	0.491
	RCMAS	0.767	3/170	0.514
	CBCL	1.456	3/170	0.228

APPENDIX P

SUMMARY TABLE FOR MULTIVARIATE ANALYSIS OF VARIANCE TESTING DIFFERENCES IN SCORES ON RCMAS, CBCL, STRESS, FREQUENCY, AND WORRY SUBSCALES OF THE CSAS. MANOVAS ARE PERFORMED SEPARATELY FOR STATUS, INCOME, AND BIRTH ORDER -- PARENT DATA.

IV	DV	Univariate F	df	p
Status	Stress	0.366	1/176	0.546
	Frequency	29.537	1/176	0.001
	Worry	9.934	1/176	0.002
	RCMAS	6.222	1/176	0.014
	CBCL	12.777	1/176	0.001
Income	Stress	1.188	3/174	0.316
	Frequency	1.639	3/174	0.182
	Worry	4.490	3/174	0.005
	RCMAS	4.856	3/174	0.003
	CBCL	3.645	3/174	0.014
Birth Order	Stress	0.188	3/174	0.905
	Frequency	0.485	3/174	0.693
	Worry	0.852	3/174	0.467
	RCMAS	0.187	3/174	0.905
	CBCL	0.619	3/174	0.604

APPENDIX Q

SUMMARY TABLE FOR ANALYSES OF VARIANCE TESTING GROUP DIFFERENCES ON THE CODDINGTON SCALE.

SOURCE	df	SS	MS	F	
Grade	3	39.373	13.124	1.809	
Sex	1	0.833	0.833	0.115	
Grade X Sex	3	5.695	1.898	0.262	
Error	194	1407.652	7.256		
Status	1	168.844	168.844	26.316	*
Error	200	1283.220	6.416		
Income	3	162.589	54.196	8.322	*
Error	198	1289.476	6.513		
Birth Order	3	41.177	13.726	1.926	
Error	198	1410.888	7.126		

* $p < .001$

APPENDIX R

FULL MODEL REGRESSION ANALYSIS PREDICTING SCORES ON RCMAS AND PSC FROM THE CSAS SUBSCALES, GRADE, SEX, FAMILY STATUS, INCOME, AND BIRTH ORDER -- CHILD DATA

A. PREDICTING RCMAS SCORES

Variable	Coeff.	Std. Error	Std. Coeff.	T	P(2 Tail)
Constant	-8.911	3.312		-2.690	0.008
Grade	0.141	0.357	0.024	0.394	0.694
Sex	1.636	0.819	0.121	1.997	0.047
Stress	0.867	0.522	0.110	1.661	0.098
Frequency	0.189	0.051	0.223	3.742	0.000
Worry	0.208	0.034	0.411	6.126	0.000
Status	2.181	1.325	0.106	1.646	0.101
Income	-0.186	0.466	-0.026	-0.400	0.690
Birth Order	0.133	0.446	0.017	0.299	0.765

Mult.R=.638 Squared Mult.R=.408 Adj. Sq. Mult.R=.383
F(8,193) = 16.599, p <.001

B. PREDICTING PSC SCORES

Variable	Coeff.	Std. Error	Std. Coeff.	T	P(2 Tail)
Constant	0.827	3.811		0.217	0.828
Grade	-0.230	0.411	-0.037	-0.560	0.576
Sex	1.644	0.943	0.116	1.744	0.083
Stress	0.700	0.601	0.085	1.165	0.245
Frequency	0.199	0.058	0.223	3.421	0.001
Worry	0.174	0.039	0.328	4.461	0.000
Status	-0.080	1.525	-0.004	-0.052	0.958
Income	0.085	0.536	0.011	0.158	0.875
Birth Order	0.120	0.513	0.015	0.234	0.815

Mult.R=.539 Squared Mult.R=.291 Adj. Sq. Mult.R=.261
F(8,193) = 9.887, p <.001

APPENDIX S

FULL MODEL REGRESSION ANALYSIS PREDICTING SCORES ON RCMAS AND CBCL FROM THE CSAS SUBSCALES, GRADE, SEX, FAMILY STATUS, INCOME, AND BIRTH ORDER -- PARENT DATA

A. PREDICTING RCMAS SCORES

Variable	Coeff.	Std. Error	Std. Coeff.	T	P(2 Tail)
Constant	2.558	3.585		0.714	0.476
Grade	-0.032	0.302	-0.007	-0.105	0.917
Sex	-0.841	0.691	-0.076	-1.217	0.225
Stress	0.783	0.593	0.088	1.320	0.188
Frequency	-0.063	0.071	-0.064	-0.895	0.372
Worry	0.255	0.034	0.563	7.582	0.000
Status	1.826	1.294	0.104	1.411	0.160
Income	0.067	0.414	0.011	0.163	0.871
Birth Order	0.097	0.400	0.015	0.234	0.809

Mult.R=.598 Squared Mult.R=.357 Adj. Sq. Mult.R=.329
F(8,178) = 12.376, p <.001

B. PREDICTING CBCL SCORES

Variable	Coeff.	Std. Error	Std. Coeff.	T	P(2 Tail)
Constant	-11.357	13.846		-0.820	0.413
Grade	-1.903	1.180	-0.099	-1.612	0.109
Sex	-6.575	2.668	-0.152	-2.464	0.015
Stress	2.028	2.274	0.059	0.892	0.374
Frequency	0.871	0.272	0.231	3.201	0.002
Worry	0.641	0.131	0.363	4.886	0.000
Status	5.733	5.071	0.086	1.131	0.260
Income	-1.775	1.651	-0.077	-1.075	0.284
Birth Order	-0.687	1.526	-0.027	-0.450	0.653

Mult.R=.617 Squared Mult.R=.380 Adj. Sq. Mult.R=.352
F(8,176) = 13.497, p <.001

APPENDIX T

ITEM MEANS AND STANDARD DEVIATIONS FOR CHILD AND PARENT SAMPLES

STRESS RATING SUBSCALE

	CHILDREN		PARENTS	
	M	SD	M	SD
1. Thinking about ghosts and scary things	3.269	1.714	3.722	1.290
2. Watching a scary TV show	3.090	1.695	3.912	1.275
3. You got seriously hurt or had to stay in the hospital	4.149	1.544	4.428	1.259
4. Meeting new kids	2.193	1.406	2.387	1.175
5. Your pet dies	4.411	1.546	4.516	1.272
6. Listening to news events about bad things that happen in the world	3.084	1.448	2.845	1.143
7. Being kidnapped	5.248	1.331	5.366	1.072
8. Trying a new activity that feels a little dangerous	3.376	1.424	3.582	1.082
9. Being bored or having nothing to do	1.906	1.209	2.201	1.204
10. Getting lost	4.361	1.480	4.830	1.200
11. Parent or teacher thinks you did something wrong when you really didn't	3.468	1.473	4.180	1.270
12. Hearing noises in the dark	3.515	1.755	4.134	1.285
13. Not being happy with the way you look	2.930	1.550	2.706	1.189
14. A parent dies	5.378	1.205	5.789	0.644
15. Grandparent or other close relative becomes seriously ill or dies	4.931	1.322	5.072	1.062
16. Parents fighting with each other	3.713	1.403	4.232	1.177
17. Brother or sister becomes seriously ill or has to stay in the hospital	3.893	1.612	4.177	1.229
18. Parents get divorced	4.624	1.553	5.254	1.047
19. Having too many things to do	3.441	1.644	3.304	1.164
20. Brother or sister bugging you	3.207	1.716	3.443	1.102

STRESS RATING SUBSCALE

	CHILDREN		PARENTS	
	M	SD	M	SD
21. Not having your mother or father around when you want them	3.663	1.569	3.649	1.103
22. Being responsible for your younger brother or sister when a parent is not home	2.696	1.661	2.079	0.979
23. Parent does not let you do things	3.235	1.592	3.242	1.170
24. Having a new baby brother or sister in the family	1.792	1.491	1.674	1.015
25. Parent loses a job	3.447	1.600	2.590	1.255
26. Being home alone after school without a parent around	2.825	1.778	2.745	1.486
27. Kids bugging or picking on you	3.365	1.573	3.572	1.120
28. A good friend becomes seriously ill or dies	4.698	1.499	4.653	1.268
29. When kids cheat in games or in school	3.152	1.541	3.273	1.141
30. Kids want you to steal things from stores	4.781	1.545	4.400	1.307
31. Having no friends	3.910	1.651	4.046	1.309
32. Fights with friends	3.606	1.588	3.655	1.069
33. Playing on a sports team and people are depending on you to do well	2.599	1.819	3.093	1.240
34. Not having as many toys or clothes as your friends have	2.508	1.441	2.345	1.107
35. Parents yelling at you	4.040	1.613	3.902	1.169
36. Teacher yelling at you	3.895	1.669	4.222	1.238
37. Teacher does not believe you	3.810	1.533	4.320	1.197
38. Making a mistake in front of other kids	3.701	1.551	3.613	1.239
39. Being late for school	2.960	1.694	2.928	1.334
40. Not understanding something when the rest of the class does	3.678	1.683	3.412	1.237
41. Kids correcting you when you give an answer in class	2.985	1.652	2.813	1.124
42. Forgetting to do work you are supposed to do	3.480	1.542	3.026	1.195
43. Getting many answers wrong on a paper	3.831	1.571	3.435	1.129
44. Not getting a good report card	4.279	1.586	3.668	1.245

STRESS RATING SUBSCALE

	CHILDREN		PARENTS	
	M	SD	M	SD
45. Being sent to the principal's office because of misbehavior	5.040	1.385	4.560	1.234
46. Wetting your pants in school	4.944	1.480	4.768	1.327
47. Taking tests	2.871	1.736	2.756	1.205
48. First day of school	2.751	1.872	2.731	1.268
49. Moving to a new neighborhood and a new school	3.540	1.718	3.547	1.388
50. Riding on the school bus	1.731	1.352	1.554	0.930
51. Performing in front of others, like giving a report in class or playing an instrument	3.327	1.789	2.737	1.342
52. Parent has to stay in the hospital	4.252	1.513	3.763	1.250
53. A grandparent or relative moves into your home	2.095	1.578	1.620	0.883
54. Mother has a job outside the home	2.080	1.415	1.943	1.075
55. Parent gets remarried after a divorce	4.058	1.761	3.236	1.506
56. Having to stay back a year in school	3.875	1.853	3.855	1.425
57. Losing a game	2.323	1.368	2.753	1.167
58. Being picked last on a team	2.757	1.609	3.072	1.199
59. You steal something and get caught	5.116	1.379	4.917	1.159
60. Going to the dentist	2.064	1.545	2.098	1.405
61. A brother or sister dies	4.793	1.648	5.619	0.789
62. You start to go blind	4.911	1.449	5.319	1.073
63. Having arguments or disagreements with your parents	3.825	1.553	3.851	1.203
64. Not having as much money to spend on things as you used to	2.851	1.661	2.604	1.135
65. A stranger wants to talk with you	4.655	1.546	4.067	1.362
66. You tried very hard to win at something or to do something important to you and it just didn't come out the way you wanted	3.592	1.678	3.758	1.209
67. How do you usually feel?	1.388	0.999	1.567	0.830

FREQUENCY SUBSCALE

	CHILDREN		PARENTS	
	M	SD	M	SD
1. Thinking about ghosts and scary things	0.762	0.426	0.974	0.158
2. Watching a scary TV show	0.871	0.335	0.985	0.123
3. You got seriously hurt or had to stay in the hospital	0.416	0.493	0.196	0.397
4. Meeting new kids	0.911	0.285	0.979	0.142
5. Your pet dies	0.431	0.495	0.366	0.482
6. Listening to news events about bad things that happen in the world	0.822	0.383	0.887	0.317
7. Being kidnapped	0.035	0.183	0.046	0.210
8. Trying a new activity that feels a little dangerous	0.624	0.484	0.830	0.210
9. Being bored or having nothing to do	0.886	0.318	0.933	0.250
10. Getting lost	0.416	0.493	0.304	0.460
11. Parent or teacher thinks you did something wrong when you really didn't	0.594	0.491	0.825	0.380
12. Hearing noises in the dark	0.718	0.450	0.866	0.341
13. Not being happy with the way you look	0.579	0.494	0.722	0.448
14. A parent dies	0.030	0.170	0.005	0.072
15. Grandparent or other close relative becomes seriously ill or dies	0.574	0.494	0.412	0.492
16. Parents fighting with each other	0.678	0.467	0.856	0.351
17. Brother or sister becomes seriously ill or has to stay in the hospital	0.243	0.429	0.149	0.357
18. Parents get divorced	0.144	0.351	0.108	0.311
19. Having too many things to do	0.713	0.452	0.789	0.408
20. Brother or sister bugging you	0.832	0.374	0.928	0.259
21. Not having your mother or father around when you want them	0.743	0.437	0.892	0.311

FREQUENCY SUBSCALE

	CHILDREN		PARENTS	
	M	SD	M	SD
22. Being responsible for your younger brother or sister when a parent is not home	0.367	0.481	0.232	0.422
23. Parent does not let you do things	0.861	0.346	0.964	0.186
24. Having a new baby brother or sister in the family	0.248	0.432	0.139	0.346
25. Parent loses a job	0.163	0.370	0.124	0.329
26. Being home alone after school without a parent around	0.574	0.494	0.515	0.500
27. Kids bugging or picking on you	0.733	0.443	0.938	0.241
28. A good friend becomes seriously ill or dies	0.183	0.387	0.072	0.259
29. When kids cheat in games or in school	0.777	0.416	0.871	0.335
30. Kids want you to steal things from stores	0.124	0.329	0.031	0.173
31. Having no friends	0.371	0.483	0.412	0.492
32. Fights with friends	0.728	0.445	0.887	0.317
33. Playing on a sports team and people are depending on you to do well	0.668	0.471	0.624	0.484
34. Not having as many toys or clothes as your friends have	0.342	0.474	0.536	0.499
35. Parents yelling at you	0.847	0.360	1.000	0.000
36. Teacher yelling at you	0.460	0.498	0.624	0.484
37. Teacher does not believe you	0.396	0.489	0.433	0.495
38. Making a mistake in front of other kids	0.673	0.469	0.938	0.241
39. Being late for school	0.604	0.489	0.495	0.500
40. Not understanding something when the rest of the class does	0.688	0.463	0.804	0.397
41. Kids correcting you when you give an answer in class	0.545	0.498	0.686	0.464
42. Forgetting to do work you are supposed to do	0.619	0.486	0.928	0.259
43. Getting many answers wrong on a paper	0.723	0.448	0.747	0.434
44. Not getting a good report card	0.233	0.423	0.206	0.405
45. Being sent to the principal's office because of misbehavior	0.158	0.365	0.134	0.341

FREQUENCY SUBSCALE

	CHILDREN		PARENTS	
	M	SD	M	SD
46. Wetting your pants in school	0.045	0.227	0.088	0.283
47. Taking tests	0.856	0.351	0.912	0.283
48. First day of school				
49. Moving to a new neighborhood and a new school	0.401	0.490	0.320	0.466
50. Riding on the school bus	0.901	0.299	0.943	0.231
51. Performing in front of others, like giving a report in class or playing an instrument	0.629	0.483	0.820	0.385
52. Parent has to stay in the hospital	0.317	0.465	0.253	0.434
53. A grandparent or relative moves into your home	0.168	0.374	0.180	0.385
54. Mother has a job outside the home	0.668	0.471	0.722	0.448
55. Parent gets remarried after a divorce	0.099	0.299	0.077	0.267
56. Having to stay back a year in school	0.173	0.378	0.144	0.351
57. Losing a game	0.688	0.463	0.959	0.199
58. Being picked last on a team	0.436	0.496	0.490	0.500
59. You steal something and get caught	0.074	0.262	0.149	0.357
60. Going to the dentist	0.861	0.346	0.943	0.231
61. A brother or sister dies	0.050	0.217	0.005	0.072
62. You start to go blind	0.054	0.227	0.005	0.072
63. Having arguments or disagreements with your parents	0.658	0.474	0.995	0.072
64. Not having as much money to spend on things as you used to	0.634	0.482	0.479	0.500
65. A stranger wants to talk with you	0.173	0.378	0.433	0.495
66. You tried very hard to win at something or to do something important to you and it just didn't come out the way you wanted	0.708	0.455	0.959	0.199
67. How do you usually feel?	0.683	0.465	1.000	0.000

WORRY SUBSCALE

	CHILDREN		PARENTS	
	M	SD	M	SD
1. Thinking about ghosts and scary things	0.351	0.477	0.469	0.499
2. Watching a scary TV show	0.248	0.432	0.454	0.498
3. You got seriously hurt or had to stay in the hospital	0.569	0.495	0.232	0.422
4. Meeting new kids	0.139	0.346	0.242	0.428
5. Your pet dies	0.673	0.469	0.423	0.494
6. Listening to news events about bad things that happen in the world	0.515	0.500	0.371	0.483
7. Being kidnapped	0.668	0.471	0.531	0.499
8. Trying a new activity that feels a little dangerous	0.347	0.476	0.376	0.484
9. Being bored or having nothing to do	0.208	0.406	0.268	0.443
10. Getting lost	0.559	0.496	0.459	0.498
11. Parent or teacher thinks you did something wrong when you really didn't	0.446	0.497	0.582	0.493
12. Hearing noises in the dark	0.396	0.489	0.593	0.491
13. Not being happy with the way you look	0.337	0.473	0.428	0.495
14. A parent dies	0.718	0.450	0.500	0.500
15. Grandparent or other close relative becomes seriously ill or dies	0.738	0.440	0.428	0.495
16. Parents fighting with each other	0.589	0.492	0.474	0.499
17. Brother or sister becomes seriously ill or has to stay in the hospital	0.530	0.499	0.139	0.346
18. Parents get divorced	0.559	0.496	0.387	0.487
19. Having too many things to do	0.446	0.497	0.392	0.488
20. Brother or sister bugging you	0.396	0.489	0.438	0.496
21. Not having your mother or father around when you want them	0.426	0.494	0.510	0.500
22. Being responsible for your younger brother or sister when a parent is not home	0.193	0.395	0.046	0.210

WORRY SUBSCALE

	CHILDREN		PARENTS	
	M	SD	M	SD
23. Parent does not let you do things	0.297	0.457	0.412	0.492
24. Having a new baby brother or sister in the family	0.193	0.395	0.067	0.250
25. Parent loses a job	0.426	0.494	0.067	0.250
26. Being home alone after school without a parent around	0.287	0.452	0.191	0.393
27. Kids bugging or picking on you	0.396	0.489	0.639	0.480
28. A good friend becomes seriously ill or dies	0.579	0.494	0.170	0.376
29. When kids cheat in games or in school	0.327	0.469	0.381	0.486
30. Kids want you to steal things from stores	0.500	0.500	0.082	0.275
31. Having no friends	0.396	0.489	0.505	0.500
32. Fights with friends	0.455	0.498	0.531	0.499
33. Playing on a sports team and people are depending on you to do well	0.287	0.452	0.345	0.475
34. Not having as many toys or clothes as your friends have	0.173	0.378	0.211	0.408
35. Parents yelling at you	0.455	0.498	0.655	0.475
36. Teacher yelling at you	0.302	0.459	0.603	0.489
37. Teacher does not believe you	0.342	0.474	0.495	0.500
38. Making a mistake in front of other kids	0.366	0.482	0.613	0.487
39. Being late for school	0.238	0.426	0.376	0.484
40. Not understanding something when the rest of the class does	0.401	0.490	0.567	0.495
41. Kids correcting you when you give an answer in class	0.302	0.459	0.330	0.470
42. Forgetting to do work you are supposed to do	0.416	0.493	0.541	0.498
43. Getting many answers wrong on a paper	0.307	0.461	0.567	0.495
44. Not getting a good report card	0.426	0.494	0.433	0.495
45. Being sent to the principal's office because of misbehavior	0.540	0.498	0.299	0.458
46. Wetting your pants in school	0.366	0.482	0.201	0.401
47. Taking tests	0.238	0.426	0.387	0.487
48. First day of school	0.287	0.452	0.510	0.500

WORRY SUBSCALE

	CHILDREN		PARENTS	
	M	SD	M	SD
49. Moving to a new neighborhood and a new school	0.312	0.463	0.299	0.458
50. Riding on the school bus	0.064	0.245	0.139	0.346
51. Performing in front of others, like giving a report in class or playing an instrument	0.223	0.416	0.397	0.489
52. Parent has to stay in the hospital	0.574	0.494	0.294	0.456
53. A grandparent or relative moves into your home	0.139	0.346	0.046	0.210
54. Mother has a job outside the home	0.153	0.360	0.216	0.412
55. Parent gets remarried after a divorce	0.322	0.467	0.113	0.317
56. Having to stay back a year in school	0.361	0.480	0.273	0.446
57. Losing a game	0.153	0.360	0.361	0.480
58. Being picked last on a team	0.173	0.378	0.361	0.480
59. You steal something and get caught	0.446	0.497	0.191	0.393
60. Going to the dentist	0.153	0.360	0.211	0.408
61. A brother or sister dies	0.465	0.499	0.186	0.389
62. You start to go blind	0.455	0.498	0.139	0.346
63. Having arguments or disagreements with your parents	0.406	0.491	0.598	0.490
64. Not having as much money to spend on things as you used to	0.248	0.432	0.186	0.389
65. A stranger wants to talk with you	0.545	0.498	0.505	0.500
66. You tried very hard to win at something or to do something important to you and it just didn't come out the way you wanted	0.307	0.461	0.670	0.470
67. How do you usually feel?	0.455	0.498	0.495	0.500

APPENDIX U

RANK ORDER OF CSAS ITEMS

STRESS RATINGS

CHILD STRESS RATINGS	M	PARENT STRESS RATINGS	M
1. A parent dies	5.4	1. A parent dies	5.8
2. Being kidnapped	5.3	2. Brother or sister dies	5.6
3. You steal something and get caught	5.1	3. Being kidnapped	5.4
4. Sent to the principal's office	5.0	4. Start to go blind	5.3
5. Wet pants in school	4.9	5. Parents get divorced	5.3
6. Grandparent/relative is seriously ill or dies	4.9	6. Grandparent/relative is seriously ill or dies	5.1
7. Start to go blind	4.9	7. You steal something and get caught	4.9
8. Brother or sister dies	4.8	8. Getting lost	4.8
9. Kids want you to steal things from stores	4.8	9. Wet pants in school	4.8
10. Good friend is seriously ill or dies	4.7	10. Good friend is seriously ill or dies	4.7
11. Stranger wants to talk to you	4.7	11. Sent to the principal's office	4.6
12. Parents get divorced	4.6	12. Your pet dies	4.5
13. Your pet dies	4.4	13. You got seriously hurt or hospitalized	4.4
14. Getting lost	4.4	14. Kids want you to steal things from stores	4.4
15. Bad report card	4.3	15. Teacher does not believe you	4.3
16. Parent is hospitalized	4.3	16. Parents fighting	4.2
17. You got seriously hurt or hospitalized	4.1	17. Teacher yells at you	4.2
18. Parent gets remarried after a divorce	4.1	18. Parent/teacher thinks you did something wrong when you really didn't	4.2
19. Parent yells at you	4.0	19. Brother/sister is seriously ill or hospitalized	4.2
20. Having no friends	3.9	20. Hear noises in dark	4.1
21. Teacher yells at you	3.9	21. Stranger wants to talk to you	4.1
22. Brother/sister is seriously ill or hospitalized	3.9	22. Having no friends	4.0
23. Staying back in school	3.9	23. Watch a scary TV show	3.9
24. Getting many answers wrong on a paper.	3.8	24. Parent yells at you	3.9
25. Having arguments/disagreements with parents	3.8	25. Staying back in school	3.9
26. Teacher does not believe you	3.8	26. Having arguments/disagreements with parents	3.9
27. Parents fighting	3.7	27. Parent is hospitalized	3.8
28. Making a mistake in front of other kids	3.7	28. Tried very hard to win at/do something important to you	

CHILD STRESS RATINGS	M
29. Not understand something when rest of class does	3.7
30. Not having mother or father around when want them	3.7
31. Fights with friends	3.6
32. Tried very hard to win at/do something important to you it just didn't work out	3.6
33. Moving to new neighborhood and school	3.5
34. Hear noises in dark	3.5
35. Forget to do work you are supposed to do	3.5
36. Parent/teacher thinks you did something wrong when you really didn't	3.5
37. Parent loses a job	3.4
38. Too many things to do	3.4
39. Try a new activity that feels a little dangerous	3.4
40. Kids bug/pick on you	3.4
41. Perform in front of others; give a report, etc	3.3
42. Think about ghosts and scary things	3.3
43. Parent does not let you do things	3.2
44. Brother/sister bugs you	3.2
45. When kids cheat in games or in school	3.2
46. Watch a scary TV show	3.1
47. Listen to news events about bad things in the world	3.1
48. Kids correct you when you give an answer in class	3.0
49. Being late for school	3.0
50. Not happy with the way you look	2.9
51. Taking tests	2.9
52. Not having as much money to spend as you used to	2.9
53. Home alone after school without parent around	2.8
54. Picked last on a team	2.8
55. First day of school	2.8
56. Responsible for your younger brother/sister when parent is not home	2.7
57. Play on a sports team and people depend on you	2.6
58. Not have as many toys/clothes as your friends have	
59. Losing a game	2.3
60. Meeting new kids	2.2

PARENT STRESS RATINGS	M
it just didn't work out	3.8
29. Think about ghosts and scary things	3.7
30. Bad report card	3.7
31. Fights with friends	3.7
32. Not having mother or father around when want them	3.6
33. Making a mistake in front of other kids	3.6
34. Try a new activity that feels a little dangerous	3.6
35. Kids bug/pick on you	3.5
36. Moving to new neighborhood and school	3.4
37. Brother/sister bugs you	3.4
38. Getting many answers wrong on a paper.	3.4
39. Not understand something when rest of class does	3.4
40. Too many things to do	3.4
41. When kids cheat in games or in school	3.3
42. Parent does not let you do things	3.2
43. Parent gets remarried after a divorce	3.2
44. Play on a sports team and and people depend on you.	
45. Picked last on a team	3.1
46. Forget to do work you are supposed to do	3.0
47. Being late for school	2.9
48. Listen to news events about bad things in the world	2.8
49. Kids correct you when you give an answer in class	2.8
50. Taking tests	2.8
51. Losing a game	2.8
52. Home alone after school without a parent around	2.7
53. Perform in front of others; give a report, etc	2.7
54. First day of school	2.7
55. Not happy with the way you look	2.7
56. Not having as much money to spend as you used to	2.6
57. Parent loses a job	2.6
58. Meeting new kids	2.4
59. Not have as many toys/clothes as your friends have	2.3
60. Being bored	2.2
61. Going to the dentist	2.1
62. Responsible for your younger	

CHILD STRESS RATINGS	M
61. Grandparent or relative moves into your home	2.1
62. Mother has a job outside the home	2.1
63. Going to the dentist	2.1
64. Being bored	1.9
65. Having a new baby brother or sister in family	1.8
66. Riding on school bus	1.7

PARENT STRESS RATINGS	M
brother/sister when parent is not home	2.1
63. Mother has a job outside the home	1.9
64. Having a new baby brother or sister in family	1.7
65. Grandparent or relative moves into your home	1.6
66. Riding on school bus	1.6

FREQUENCY RATINGS

PERCENTAGE OF CHILDREN EXPERIENCING EVENT - CHILDREN AND PARENT RATINGS

	CHILD FREQUENCY RATINGS	%		PARENT FREQUENCY RATINGS	%
1.	Meeting new kids	91	1.	Feeling nervous	100
2.	Riding on school bus	90	2.	Parent yells at you	100
3.	Being bored	89	3.	Having arguments/ disagreements with parents	100
4.	Watching a scary TV show	87	4.	Watching a scary TV show	99
5.	Going to the dentist	86	5.	Meeting new kids	98
6.	Parent does not let you do things	86	6.	Think about ghosts and scary things	97
7.	Taking tests	86	7.	Parent does not let you do things	96
8.	Parent yells at you	85	8.	Losing a game	96
9.	Brother/sister bugs you	83	9.	Tried very hard to win at/ do something important to to you and it didn't work out	96
10.	Listen to news events about bad things in the world	82	10.	Going to the dentist	94
11.	When kids cheat in games or in school	78	11.	Riding on the school bus	94
12.	Thinking about ghosts and scary things	76	12.	Kids bug/pick on you	94
13.	Not having mother or father around when you want them	74	13.	Making a mistake in front of other kids	94
14.	Kids bug/pick on you	73	14.	Being bored	93
15.	Fights with friends	73	15.	Brother/sister bugs you	93
16.	Getting many answers wrong on a paper	72	16.	Forget to do work supposed to do	93
17.	Hear noises in dark	72	17.	Taking tests	91
18.	Too many things to do	71	18.	Not having mother or father around when you want them	89
19.	Tried very hard to win at something important to you and it didn't work out	71	19.	Fights with friends	89
20.	Losing a game	69	20.	Listening to news events about bad things in world	89
21.	Not understand something when rest of class does	69	21.	When kids cheat in games or in school	87
22.	Feeling nervous	68	22.	Hear noises in dark	87
23.	Parents fighting	68	23.	Parents fighting	86
24.	Making a mistake in front of other kids	67	24.	Try new activity that feels a little dangerous	83
25.	Mother has a job outside the home	67	25.	Parent/teacher thinks you did something wrong when you really didn't	83
26.	Play on a sports team and people depend on you	67	26.	Perform in front of others; give a report,etc.	82
27.	Having arguements/disagreements with parents	66	27.	Not understand something when rest of class does	80
28.	Not having as much money to spend as used to	63	28.	Too many things to do	79
29.	Perform in front of others; give a report, etc.	63	29.	Getting many answers wrong on a paper	75
30.	Try a new activity that feels a little dangerous	62			

CHILD FREQUENCY RATINGS	%
31. Forget to do work you are supposed to do	62
32. Late for school	60
33. Parent/teacher thinks you did something wrong when you really didn't	59
34. Not happy with the way you look	58
35. Home alone after school without a parent around	57
36. Grandparent/relative is seriously ill or dies	57
37. Kids correct you when you give an answer in class	55
38. Teacher yells at you	46
39. Picked last on a team	44
40. Your pet dies	43
41. You got seriously hurt or hospitalized	42
42. Getting lost	42
43. Moving to a new neighbor-hood and school	40
44. Teacher not believe you	40
45. Having no friends	37
46. Responsible for you younger brother/sister when parent is not home	37
47. Not have as many toys/ clothes as your friends have	34
48. Parent is hospitalized	32
49. Having a new baby brother or sister in family	25
50. Brother/sister is seriously ill or hospitalized	24
51. Bad report card	23
52. Good friend is seriously ill or dies	18
53. Staying back in school	17
54. Stranger wants to talk with you	17
55. Grandparent or relative moves into you home	17
56. Parent loses job	16
57. Sent to principal's office	16
58. Parents get divorced	14
59. Kids want you to steal things from stores	12
60. Parent gets remarried after a divorce	10
61. You steal something and get caught	07
62. Wet pants in school	05

PARENT FREQUENCY RATINGS	%
30. Not happy with way you look	72
31. Mother has a job outside the home	72
32. Kids correct you when you give an answer in class	69
33. Teacher yells at you	62
34. Playing on sports team and people depend on you	62
35. Not have as many toys/ clothes as friends have	54
36. Home alone after school without a parent around	52
37. Being late for school	50
38. Picked last on a team	49
39. Not having as much money to spend as you used to	48
40. Stranger wants to talk with you	43
41. Teacher does not believe you	43
42. Having not friends	41
43. Grandparent/relative is seriously ill or dies	41
44. Your pet dies	37
45. Moving to a new neighbor-hood and school	32
46. Getting lost	30
47. Parent is hospitalized	25
48. Responsible for your younger brother/sister when parent is not home	23
49. Bad report card	21
50. You got seriously hurt or hospitalized	20
51. Granparent/relative moves into your home	18
52. You steal something and get caught	15
53. Brother/sister is seriously ill or hospitalized	15
54. Stay back a year in school	14
55. Having a new brother/ sister in your family	14
56. Sent to principal's office	13
57. Parent loses job	12
58. Parents get divorced	11
59. Wet pants in school	09
60. Parent gets remarried after a divorce	08
61. Good friend gets seriously ill or dies	07

CHILD FREQUENCY RATINGS	x
63. Start to go blind	05
64. Brother or sister dies	05
65. Being kidnapped	04
66. A parent dies	03

PARENT FREQUENCY RATINGS	x
62. Being kidnapped	05
63. Kids want you to steal things from stores	03
64. A parent dies	01
65. You start to go blind	01
66. Brother or sister dies	01

WORRY RATINGS

PERCENTAGE OF CHILDREN WORRYING ABOUT EVENT - CHILD AND PARENT RATINGS

	CHILD WORRY RATINGS	%		PARENT WORRY RATINGS	%
1.	Grandparent/relative is seriously ill or dies	74	1.	Tried very hard to win at something important to you and it didn't work out	67
2.	A parent dies	72	2.	Parent yells at you	65
3.	Your pet dies	67	3.	Kids bug/pick on you	64
4.	Being kidnapped	67	4.	Make mistake in front of other kids	61
5.	Parents fighting	59	5.	Teacher yells at you	60
6.	Good friend is seriously ill or dies	58	6.	Having arguments/disagreements with parents	60
7.	Parent is hospitalized	57	7.	Hear noises in dark	59
8.	You got seriously hurt or hospitalized	57	8.	Parent/teacher thinks you did something wrong when you really didn't	58
9.	Parents get divorced	56	9.	Not understand something when rest of class does	57
10.	Getting lost	56	10.	Getting many answers wrong on a paper	57
11.	Stranger wants to talk to you	54	11.	Forget to do work you are supposed to do	54
12.	Sent to the principal's office	54	12.	Fights with friends	53
13.	Brother/sister is seriously ill or hospitalized	53	13.	Being kidnapped	53
14.	Listen to news events about bad things in the world	51	14.	Not having mother or father around when you want them	51
15.	Kids want you to steal things from stores	50	15.	Stranger wants to talk with you	51
16.	Brother or sister dies	47	16.	Having no friends	51
17.	Feeling nervous	46	17.	A parent dies	50
18.	Start to go blind	46	18.	Teacher does not believe you	49
19.	Parent yells at you	46	19.	Feeling nervous	49
20.	Fights with friends	46	20.	Parents fighting	47
21.	You steal something and get caught	46	21.	Thinking about ghosts and scary things	47
22.	Too many things to do	45	22.	Getting lost	46
23.	Parent/teacher thinks you did something wrong when you really didn't	45	23.	Watching a scary TV show	45
24.	Bad report card	43	24.	Brother/sister bugs you	44
25.	Parent loses job	43	25.	Bad report card	43
26.	Not having mother or father around when you want them	43	26.	Not happy with the way you look	43
27.	Forget to do work you are supposed to do	42	27.	Grandparent/relative is seriously ill or dies	43
28.	Having arguments/disagreements with parents	41	28.	Your pet dies	42
29.	Not understanding something when rest of class does	40	29.	Parent does not let you do things	41
30.	Having no friends	40	30.	Perform in front of others; give a report, etc.	40
31.	Hear noises in dark	40	31.	Too many things to do	39
32.	Kids bug/pick on you	40			
33.	Brother/sister bugs you	40			

CHILD WORRY RATINGS	%
34. Making a mistake in front of other kids	37
35. Wet pants in school	37
36. Staying back in school	36
37. Think about ghosts and scary things	35
38. Try a new activity that feels a little dangerous	35
39. Teacher does not believe you	34
40. Not happy with the way you look	34
41. When kids cheat in games or in school	33
42. Parent gets remarried after a divorce	32
43. Moving to a new neighbor-hood and school	31
44. Getting many answers wrong on a paper	31
45. Tried very hard to win at something important to you and it just didn't work out	31
46. Kids correct you when you give an answer in class	30
47. Teacher yells at you	30
48. Parent does not let you do things	30
49. Play on a sports team and people depend on you	29
50. Home alone after school without a parent around	29
51. Watching a scary TV show	25
52. Not having as much money to spend as you used to	25
53. Being late for school	24
54. Taking tests	24
55. Perform in front of others; give a report, etc.	22
56. Being bored	21
57. Responsible for younger brother/sister when parent is not home	19
58. Having a new baby brother or sister in family	19
59. Picked last on a team	17
60. Not have as many toys/ clothes as your friends have	17
61. Going to the dentist	15
62. Losing a game	15

PARENT WORRY RATINGS	%
32. Taking tests	39
33. Parents get divorced	39
34. When kids cheat in games or in school	38
35. Try a new activity that feels a little dangerous	38
36. Being late for school	38
37. Listen to news events about bad things in the world	37
38. Picked last on a team	36
39. Losing a game	36
40. Play on a sports team and people depend on you	35
41. Kids correct you when you give an answer in class	33
42. Moving to a new neighbor-hood and school	30
43. Sent to the principal's office	30
44. Parent is hospitalized	29
45. Stay back in school	27
46. Being bored	27
47. Meeting new kids	24
48. You got seriously hurt or hospitalized	23
49. Mother has a job outside the home	22
50. Not have as many toys clothes as friends have	21
51. Going to the dentist	21
52. Wet pants in school	20
53. Home alone after school without a parent around	19
54. You steal something and get caught	19
55. Brother or sister dies	19
56. Not having as much money to spend as you used to	19
57. A good friend is seriously ill or dies	17
58. Riding on the school bus	14
59. Brother/sister is seriously ill or hospitalized	14
60. Start to go blind	14
61. Parent gets remarried after a divorce	11
62. Kids want you to steal things from stores	08
63. Having a new baby brother or sister in family	07

CHILD WORRY RATINGS	%
63. Mother has a job outside the home	15
64. Grandparent or relative moves into your home	14
65. Meeting new kids	14
66. Riding on school bus	06

PARENT WORRY RATINGS	%
64. Parent loses a job	07
65. Grandparent/relative moves into your home	05
66. Responsible for your younger brother or sister when parent is not home	05

APPENDIX V

EVENTS SIGNIFICANTLY CORRELATED WITH ANXIETY, PSYCHOSOMATIC SYMPTOMS, AND BEHAVIOR PROBLEMS ($p < .001$)

STRESSFULNESS OF AN EVENT

Child Stress Ratings

	Event	r
1.	Many answers wrong on a paper	.345
2.	Teacher does not believe you	.316
3.	Picked last on a team	.310
4.	Tried hard to win/do something important to you and didn't work out	.309
5.	Mother has job outside the home	.305
6.	Not having mother/father around when you want them	.299
7.	Teacher yells at you	.296
8.	Kids correct you when you give an answer in class	
9.	You forget to do work you are supposed to	.282
10.	Thinking about ghosts and scary things	.278
11.	Being kidnapped	.275
12.	Sent to principal's office	.271
13.	Not understanding something when rest of class does	.263
14.	Not as much money to spend	.252
15.	Move to new neighborhood and go to new school	.249
16.	Try new activity that feels a little dangerous	.248
17.	Losing a game	.248
18.	Parent yells at you	.246
19.	Kids bug/pick on you	.240
20.	Grandparent/relative seriously ill or dies	.234
21.	Responsible for younger brother/sister when parent is not home	.221
22.	Stay back year in school	.216

Parent Stress Ratings

	Event	r
1.	Feel nervous	.383
2.	Not happy with way you look	.344
3.	Parent does not let you do things	.311
4.	Losing a game	.262
5.	Kids bug/pick on you	.224
6.	Having disagreement/ arguments with parents	.210
7.	Making a mistake in front of other kids	.207

Child Stress Ratings

Event	r
23. Listen to news about bad things that happen in world	.211
24. Parent not let you do things	.208
25. Parent get divorced	.208

EXPERIENCE WITH AN EVENT

Child Frequency Ratings

Event	r
1. Having no friends	.279
2. Not happy with way you look	.263
3. Try a new activity that feels a little dangerous	.219
4. Teacher/parent thinks you did something when you really didn't	.213

Parent Frequency Ratings

Event	r
1. Bad report card	.260
2. Having no friends	.214
3. Parent yells at you	.213

WORRY ABOUT AN EVENT

Child Worry Ratings

Event	r
1. Getting many answers wrong on a paper	.364
2. Having arguments/ disagreements with parents	.361
3. Fights with friends	.358
4. Not happy with way you look	.346
5. Parent/teacher thinks you did something wrong when you really didn't	.334
6. Parent yells at you	.328
7. Feeling nervous	.309
8. Not having as much money as you used to	.301
9. Moving to a new neighborhood and new school	.300
10. Making a mistake in front of other kids	.299
11. Parents get divorced	.296

Parent Worry Ratings

Event	r
1. Feeling nervous	.388
2. Teacher/parent thinks you did something wrong when you really didn't	.353
3. Having arguments/ disagreements with parents	.352
4. Losing a game	.332
5. Having too many things to do	.317
6. Teacher yelling at you	.313
7. Teacher does not believe you	.303
8. Bad report card	.292
9. Hearing noises in dark	.291
10. Making a mistake in front of other kids	.287
11. Kids bug/pick on you	.281
12. Perform in front of others; give report..	.281

Child Worry Ratings

Event	r
12. Parent does not let you do things	.293
13. Parent loses job	.291
14. Wet pants in school	.289
15. Stranger wants to talk to you	.288
16. Sent to principal's office	.286
17. Kids bug/pick on you	.286
18. Tried hard to do/win something and didn't work out	.275
19. Good friend gets seriously ill or dies	.275
20. Parents fighting	.273
21. You steal something and get caught	.261
22. Late for school	.260
23. Bad report card	.260
24. When kids cheat in games or in school	.259
25. Teacher yelling at you	.258
26. Kids correct you when give an answer in class	.258
27. Teacher not believe you	.256
28. Listen to world events about bad things that happen in world	.254
29. Parent get remarried after a divorce	.254
30. Not understanding something when rest of class does	.253
31. Getting lost	.253
32. Mother has a job outside the home	.251

Parent Worry Ratings

Event	r
13. Getting lost	.275
14. Parent does not let you do things	.271
15. Not happy with way you look	.265
16. A parent dies	.261
17. Parents fighting	.261
18. Stay back year in school	.259
19. You steal something and get caught	.258
20. Stranger wants to talk with you	.257
21. Picked last on team	.253
22. Many answers wrong on a paper	.253
23. Watching a scary TV show	.253

APPENDIX W

LETTERS OF APPROVAL

unh
UNIVERSITY OF NEW HAMPSHIRE
DURHAM, NEW HAMPSHIRE 03824

Office of the
Director of Research

April 7, 1986

Maryann Collins Corsello
Psychology Department
Conant Hall

Dear Maryann Collins Corsello,

The Institutional Review Board for the Protection of Human Subjects has approved the protocols for your project "Childhood Stress - Pilot Phase" as expedited.

Sincerely,

Mary Ellen Wright

Mary Ellen Wright
IRB

MEW/km

unh
UNIVERSITY OF NEW HAMPSHIRE
DURHAM, NEW HAMPSHIRE 03824

Office of the
Director of Research

September 22, 1986

Mary Ellen Collins Corsello
Psychology
Conant

Dear Mary Ellen,

The Institutional Review Board for the Protection of Human Subjects has approved the protocols for your project "Childhood stress study - Phase II" as expedited.

Sincerely,

Mary Ellen Wright

Mary Ellen Wright
IRB

MEW/nc